

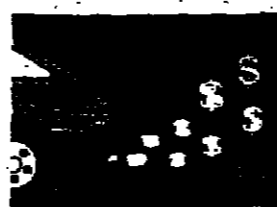
# FINANCIAL TIMES



**EU anger**  
Patience with  
Britain runs out  
Ian Davidson, Page 12



**Hong Kong**  
Handover  
bonanza ahead  
Page 6



**Car wars**  
Paying for  
cleaner emissions  
Environment, Page 10

**Today's surveys**  
UK engineering  
Power generation equipment  
Separate sections

World Business Newspaper

WEDNESDAY JUNE 26 1996

## Beijing and Bonn attempt to end dispute over Tibet

Beijing and Bonn tried to stop their dispute over Chinese policy in Tibet, which has led to the cancellation of several German ministerial visits, damaging their long-term relations. A Chinese foreign ministry spokesman said that, as long as the German government took "concrete and effective" measures to make amends, relations would not be allowed to deteriorate further. He did not specify what the measures might involve. Page 14; Editorial Comment, Page 15

**No commitment on West Bank troops:** Benjamin Netanyahu, Israel's prime minister, has refused to give Warren Christopher, US secretary of state, a commitment that his government would honour Israel's promise to pull troops out of the Israeli-occupied West Bank town of Hebron, a flashpoint of Arab-Jewish violence. Page 4; Editorial Comment, Page 13

**Jobs cut at French naval shipyards:** The French government announced a big reorganisation of its DCN navy shipyards, putting them under pressure to become more efficient and cutting the 24,000 workforce by a quarter. Page 14; Jobless rate near record, Page 3

**Growth set to fall in eastern Germany:** The east German economy will grow no more than 3 per cent this year, nearly half the rate forecast a year ago, according to reports by the institutes for economic research in Halle and Berlin. Total unemployment will remain high at 30 per cent of the labour force. Page 2

**Italy details media and telecoms plans:** Media and telecommunications companies will be free to compete with one another, supervised by a single regulatory authority, under planned legislation in Italy, according to the country's post and telecoms minister. Page 2

**Dole takes initiative on TV speeches:** Republican Bob Dole has agreed to a new proposal for US presidential candidates to deliver short political speeches on free time donated by the TV networks before the November elections. Page 5

**Quelle, Germany's large mail order company** re-established after the second world war to provide cheap, quality clothes to Germans, moved upward by signing a contract with Karl Lagerfeld, the luxury designer. Page 15

**IBM to create 1,000 jobs in Ireland:** International Business Machines, the world's largest computer company, is to create 1,000 jobs by building a new customer support centre in Ireland and expanding its call centre in Scotland. Page 8

**Nycomed loses 23% after warnings:** Shares in Nycomed, the Norwegian pharmaceuticals group, plunged almost 23 per cent after the company warned that profits this year would be well below market expectations. Page 15; Lex, Page 14; World Stocks, Page 34

**Lada manufacturer lifts production:** AvtoVAZ, the Russian manufacturer of Lada cars, remains in a weak financial position after recording a net loss of Rb2,020bn (\$398m) last year, but is slowly improving its productivity and expanding its production. Page 16

**Deutsche Telekom may list in Asia:** Deutsche Telekom, the state-owned German group, said it was considering listing its shares on an Asian stock exchange. Page 20

**Asia sets price for NY listings:** The French insurance group, announced that its shares to be listed on the New York Stock Exchange are to be priced at FF274 each. Page 16

**Boeing, the US aircraft manufacturer,** said it expected business in Asia to grow strongly in the next 10 years. Page 8

**AOL chief quits after 4 months:** William Rozumek has resigned as president and chief operating officer after four months at America Online, the leading US online service provider. Page 18

**US hurdle for BA-American deal:** US airlines are rallying to prevent the proposed alliance between British Airways and American Airlines from being approved. Page 8

**The World Bank announced an important reform** of its lending to poor countries which will substantially widen the choice of currencies in which they can borrow. Page 14

**Record international borrowing for Fiat:** Fiat, the Italian automotive and industrial group, has appointed Citibank International and Deutsche Bank Luxembourg to organise a \$1bn multi-currency credit line, its largest ever international credit facility. Page 16

STOCK MARKET INDICES		GOLD	
New York: Dow Jones Ind. 5,705.8 (+12.18)	NASDAQ Composite 1,178.5 (+4.0)	London: Gold 338.5 (+0.3)	COMEX Gold 338.5 (+0.3)
Europe and Far East			
FTSE 100 2,571.17 (+0.3)			
US LUNCHTIME RATES		DOLLAR	
Federal Funds Rate 5.75%		New York: Treasury 1.5400	
3-month Treasury Bill 5.50%		DM 1.5300	
10-year Treasury 6.50%		FF 1.2800	
Yield 7.02%		SP 1.0800	
OTHER RATES		STERLING	
3-month interbank 3.4%		London: £ 1.5400 (1.5300)	
3-month US dollar 5.5%		DM 1.5300 (1.5315)	
3-month yen 6.0%		FF 1.2800 (1.2835)	
3-month euro 6.0%		SP 1.0800 (1.0815)	
3-month yen 6.0%			
3-month yen 6.0%			
NORTH SEA OIL (August)		TOKYO CLAS	
Brent Dated \$16.57 (16.38)			

CONTENTS	
European News 23	Companies & Finance 22
International News 4	Markets 23
Asia-Pacific News 5	Oil 24
American News 5	Technology 10
World Trade News 5	Arts 11
UK News 9	Asia Guide 23
World 14	FTSE-A UK Index 24
London SE 25	Foreign Exchange 25
Wall St/Buzz 24	

## Taiwan police name 126 triads in crime crackdown

Taiwan's National Police Administration yesterday publicly identified 126 of the country's top crime organisations, known as triads, in an unprecedented crackdown on organised crime. It also named 5,800 people who it said were gangsters. The public disclosure of the extent of organised crime in Taiwan comes at an awkward time for the country's first democratically elected president, Mr Lee Teng-hui, who is under increasing pressure to tackle crime and its links with corporate and public life. The police say triads - known as "black societies" in Chinese - have taken advantage of the island's fledgling democracy to "launder" their reputations by successfully standing for public office. Several known gangsters

who had moved into public life were identified in yesterday's United Daily News, a leading mass selling newspaper tipped off by police. The triads are increasingly moving into legitimate businesses, the paper said, especially public infrastructure and construction, departing from traditional businesses such as gambling and prostitution. The gang members named include elected representatives at national and local government, some of whom were said to control from behind the scenes large crime organisations. The paper also published a detailed map of Taiwan showing the number of gangsters and the main gangs in each county and city based on information provided by the police administration. The largest Taiwan-based triad is the Bamboo Union Gang with over 600 identified members, followed by the Four Seas Gang with 500-plus members and the Heavenly Path Alliance numbering 400 or more. Mr Lee's popularity has sunk following his election in March. Several big corruption scandals have erupted in recent months, implicating senior figures in the ruling party as well as hundreds of policemen. The popular justice minister, Mr Ma Ying-jeou, widely regarded as having led an effective campaign against corruption and organised crime during his three years in the post, was demoted to minister without portfolio in a cabinet reshuffle earlier this month. The NPA, part of the interior ministry, has drafted an organised crime prevention bill, aimed at preventing known gangsters from running for public office.

## Sackings strengthen Lebed

## Yeltsin ousts seven more generals in army purge

Russian President Boris Yeltsin sacked seven hardline generals yesterday in move that threatened to destabilise the country's army a week ahead of a presidential run-off between Mr Yeltsin and Mr Gennady Zyuganov, his Communist rival. The purge followed the dismissal last week of the nation's four most powerful hardline politicians, and further strengthened Mr Alexander Lebed, the retired general who joined the Kremlin team as security chief after finishing third in the first round of presidential voting. Four of the officers sacked yesterday had been publicly named last week by Mr Lebed, who demanded their sackings because of their alleged efforts to protest at the dismissal of General Pavel Grachev, the minister of defence, who was one of the victims of last week's government shuffle. Russian military analysts said they expected the purge of Mr Grachev's supporters to continue beyond the second stage of the presidential elections, assuming Mr Yeltsin wins. This would leave the top jobs free for allies of the new defence minister, who has yet to be named. They warned the shake-up could create confusion in Russia's security forces at a decisive moment in the nation's development. Over the past 10 days, the defence minister, the chief of the



An estimated 25,000 people, protesting against the forthcoming G7 summit, marched through Lyons, France, yesterday. The demonstrators demanded that the leaders of the major industrial powers, whose three-day meeting begins tomorrow, give priority to jobs rather than monetary policy. The banner reads: 'G7: Take care, these men are dangerous', and displays caricatures of the G7 leaders

foreign intelligence service - a revamped offspring of the KGB - the head of the presidential guard and other senior military personnel have all been fired. Yesterday's purge included Gen Victor Baryndin, first deputy head of the general staff, Gen Vladimir Shulikov, deputy commander of land forces, and Gen Valery Lapshov, head of the defence minister's personal staff. The removal of Grachev loyalists from the ministry appeared to consolidate last week's victory of the reformist faction in the government over Kremlin hardliners, in a struggle which has dominated Russian political life for the past five years. Another sign of what some reformist observers are hoping will be a decisive shift in Mr Yeltsin's often ambiguous politics came when the president signed a decree ordering the withdrawal of Russian troops from the Chechen republic by September 1. The pull-out from the deeply unpopular conflict could win votes for Mr Yeltsin on July 3 in the run-off against Mr Gennady Zyuganov, the Communist party candidate. The pull-out had been opposed by hawks in the military, including Gen Grachev, one of the strongest voices behind the decision to invade Chechnya. But Mr Yeltsin was careful to hedge his bets yesterday, telling

Continued on Page 14  
Russian economy shrinks, Page 2

## Volvo to sell \$2bn stake in drug group

Offer will be for two-thirds of 14% holding in Pharmacia & Upjohn

Volvo, the car and truck maker, is to launch one of Sweden's biggest share offerings next month when it sells at least two-thirds of its 14 per cent holding in the Swedish-US pharmaceutical group Pharmacia & Upjohn for almost \$2bn. The global offer, to be priced in late July, will be for 40m Pharmacia & Upjohn shares, with an option to sell a further 6.5m if the offer is over-subscribed. Pharmacia & Upjohn shares yesterday traded at SEK285, valuing the tranche Volvo will sell at SEK13.1bn (\$1.96bn). Volvo was committed to selling all the Pharmacia & Upjohn holding by the end of this year as part of a SEK40bn non-core asset

disposal programme. But it held back from offering the entire holding in one tranche apparently because of worries about placing such a large stake. It has pledged to hold on to its residual stake for six months after the July sale. The offering will be worth less than the SEK18bn flotation in March of a 50 per cent stake in Scania. Volvo's rival Swedish truckmaker, Scania, is also planning to sell a further 6.5m if the offer is over-subscribed. Pharmacia & Upjohn shares yesterday traded at SEK285, valuing the tranche Volvo will sell at SEK13.1bn (\$1.96bn). Volvo was committed to selling all the Pharmacia & Upjohn holding by the end of this year as part of a SEK40bn non-core asset

50 per cent stake in Pharmacia - the company which last year merged with Upjohn to form the present group. Goldman Sachs and Merrill Lynch have been appointed the joint global co-ordinators for the sale. Analysts said the timing was reasonably favourable. Although pharmaceutical stocks are weaker than last year, Pharmacia & Upjohn can argue that its merger - which created one of the world's top 10 drug groups - means the company is well placed at a time when the industry is undergoing restructuring. Profits in the first quarter were down from \$28m to \$20m following initial restructuring charges from the merger. Sales rose 3.5 per cent to \$1.74bn - slower than other large drug companies. Pharmacia & Upjohn said it is on track to achieve projected savings from streamlining its combined operations of \$500m a year.

Continued on Page 14  
Volvo executive to head NedCar, Page 16

## Brussels sees EU expansion eastward without budget rise

The European Commission calculates that the European Union can absorb East European entrants without increasing its budget in real terms in the next 10 years. The Brussels assumption reflects increasing pressure from net contributors such as Germany, the Netherlands and the UK to control EU spending. But the implication is that net beneficiaries will see some reductions in Brussels aid as a result of tighter rules on regional support. It also points to a longer-than-expected timetable for membership for the former Communist countries of central and eastern Europe. A senior Commission official said yesterday the earliest membership for an advanced guard of central European countries was likely to be around 2002-2003. Malta and Cyprus could join sooner, depending on resolution of the Greek-Turkish dispute over Cyprus. As part of an internal review, the Commission has produced

new calculations which assume the costs of expansion to eastern Europe are high, but manageable. Central to this assumption is the view that the EU budget is unlikely to rise beyond 1.27 per cent of EU gross domestic product between 1999-2006. Commission calculations show around 0.46 per cent of EU GDP would be available for regional aid and "cohesion" funds, which funnel money to Greece, Ireland, Portugal and Spain. These figures would create a regional aid pot of Ecu20bn (\$22bn) disbursing an average of Ecu27bn a year - a 30 per cent increase on the current 1994-99 regional aid budget of Ecu17bn, disbursing Ecu20bn a year. Mrs Monika Wulf-Mathies, EU regional affairs commissioner, told a committee of the Bundestag in Bonn last week that it was possible to put forward an "attractive" financial package for central and eastern European countries, including extra money ahead of accession. Mrs Wulf-Mathies said it might be possible to increase funding under the Phare aid programme

seven-fold from Ecu1bn a year, raising total funds to Ecu50bn between 2000 and 2006. The commissioner also sought to reassure net recipients, notably Spain, that there would be enough money to satisfy their needs. But she served notice that some regions in Spain, Portugal, Ireland and Italy - as well as France, Belgium and the Netherlands - would no longer qualify for Brussels aid. Under so-called Objective One funding, regions can qualify for EU funds if their per capita GDP is below 75 per cent of the EU average. The Commission wants to tighten the aid map, partly to raise money for eastern Europe and partly to wean off net recipients who have benefited from regional aid. Ireland is the most obvious target. Regional aid accounts for one quarter of the total EU budget and is intended to help poorer countries cope with the single market. It is the second biggest item behind the Common Agricultural Policy. Labour outlines vision, Page 9

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# Bosnia wins go-ahead for elections

By Laura Silber, Balkans Correspondent

The head of the Organisation for Security and Co-operation in Europe (OSCE) yesterday gave the go-ahead for Bosnia's first post-war elections to take place on September 14.

Mr Flavio Cotti, the Swiss foreign minister, who holds the OSCE chair, told the OSCE permanent council: "The decision to give the green light for the elections, and I say this to you in all frankness, has been anything but easy."

Despite numerous violations of the Dayton peace accords, Mr Cotti was under intense pressure, in particular from the US, to certify elections could be held within the time period outlined by the year-long Dayton agreement.

All three sides have failed to respect freedom of movement and allow the return of refugees.

Mr Cotti's announcement coincided with remarks from a senior Bosnian Serb official signalling that Mr Radovan Karadzic, the Bosnian Serb leader wanted on war crimes charges, would soon resign.

Mr Momcilo Krajcinik, Speaker of the Bosnian Serb assembly, yesterday said the Bosnian Serb leader "would sacrifice his power if that is in the interest of the Serb peace."

"There are certain warnings that every rational party should listen to," he said after talks with Mr Carl Bildt, the High Representative who is

responsible for the civilian side of the Dayton accords.

International mediators have threatened to re-impose sanctions on Serb-led Yugoslavia unless Mr Karadzic disappears from the political scene.

The presence of Mr Karadzic is seen as a major obstacle to holding free and fair elections in Bosnia.

Under the Dayton plan, war criminals indicted by the international tribunal cannot hold public office and should be handed over to The Hague.

In Pale, Mr Karadzic's mountain stronghold in northern Bosnia, Mr Bildt said he was not seeking the immediate renewal of sanctions. "We mean serious business when it comes to the peace agreement. This is not a piece of paper to be treated like nothing."

Mr Cotti yesterday added his voice to calls for the resignation of Mr Karadzic. "If the elections are to be effective, then every single possibility of direct or indirect exertion of influence by indicted war criminals like Radovan Karadzic must be hindered," he said.

"He provokes the signatories to the peace agreement and indeed the entire world by flaunting his freedom of action," he added.

Mr Cotti urged international organisations to work to establish the "minimum conditions" so democratic elections could take place. "The prerequisites... have not been fulfilled," he said.

# Poland offers Ukraine a view to the west

Matthew Kaminski on neighbourly support for an attempt to shake off Kiev's strong bonds to Moscow

Ukrainian President Leonid Kuchma, a frequent flyer to Moscow, yesterday began his second visit to Poland in just three weeks, underlining a shift in Ukrainian foreign policy from east to west.

Ukraine is vigorously trying to recast itself as a central European country eager for membership of the western world's elite clubs and wary of the options for co-operation offered by a Russia caught up in presidential election politics.

A public tilt toward a European, liberal and independent future for Ukraine would fulfil the best-case hopes for regional stability drawn up by western strategists concerned that the country might revert to Russian domination or break-up in civil war. And a rapprochement between Kiev and Warsaw would bring together eastern Europe's two largest countries.

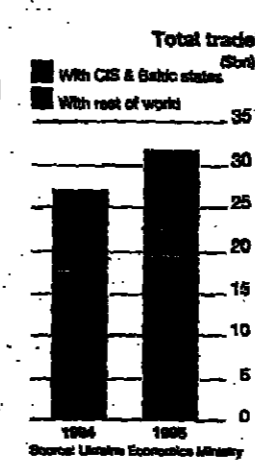
Poland's President Aleksander Kwasniewski this month won praise from the west for extending Mr Kuchma an unprecedented invitation to an annual summit of central European presidents held in Lanut, a Polish medieval city. There, Mr Kuchma declared clearly, for the first time, that Kiev wanted to join the European Union.

He called for the EU to start negotiations for a free trade area on time in 1996. He also said Ukraine wanted to strengthen ties with Nato - short of membership - and quickly to join the World Trade Organisation and the Central European Free Trade Area. And yesterday President Kwasniewski pledged Polish support for Kiev's bid to join the latter.

"Does the exclusion of Ukraine's 52m people from Europe make sense," Mr Kuchma asked a Warsaw weekly, *Polityka*, after the summit. "I reckon Europe is too small to give up on us easily. And, in fact, Ukraine was always in Europe, and history forces us to remember this." Poland has welcomed Kiev's adoption of an internal reform programme and policy of deepening ties with the west as the key to creating a strong buffer against Russia.

"It is all the more significant because if Ukraine becomes truly independent and European, then the chances that Russia will do the same, rather than revert to great empire tendencies, are all the greater," said Mr Janusz Oryszewski, former Polish defence minister. The two are unlikely allies. Poland in the past has violently blunted Ukrainian

Ukraine: trade with west expands



national ambitions. But Poland's break from the Soviet bloc gave impetus to the non-Russian republic's freedom movements. Warsaw was first to recognise Ukraine's independence. The current borders, created when Stalin moved Poland 200km west, were acknowledged the following year.

Political contacts are catching up with the first symbolic acts, in spite of occasional flare-ups over Polish Catholic missionaries in Ukraine or unresolved tensions stemming

from the post-war fate of the Ukrainian minority in Poland. Mr Andrzej Olechowski, a former Polish foreign minister, this month signed a joint declaration with Kuchma, the Ukrainian independence movement, to step up inter-government contacts and hold more joint military exercises.

"Leave the history to the historians," said Mr Hennady Udovenko, Ukrainian foreign minister, who has been ambassador to Warsaw. "Our relations with Poland are developing very quickly."

Trade has picked up too, from \$199.4m in 1993 to \$714.6m last year (still only 2 per cent of all Ukrainian trade), but the statistics fail to include a lively cross border "shuttle trade" in consumer goods.

Warsaw lobbied for Ukrainian membership in the Council of Europe last year and this month in the Central European Initiative, another regional forum. But Polish support might be limited by concern in Warsaw that entanglement in Ukraine might jeopardise its own aspiration for EU membership.

Ukraine's ambitions at the EU may be hard to realise. It was the first former Soviet state, after the Baltics, to sign a partnership and co-operation agreement with the EU in 1994, but remains one of eastern Europe's poorest and least reformed countries.

As a result, the free trade agreement sought in two years might not make economic sense. Mr Udovenko's call for associated membership, which implies eventual membership in the EU, "is quite a long way away," an EU official said.

Paradoxically, Mr Kuchma, a Soviet-era industrial boss, won office in 1994 promising to "integrate" Ukraine with Russia. But, exhibiting the independent streak of past Ukrai-

nian leaders that led anxious Tsars and party secretaries in Moscow to crack down on their unruly southern province, Mr Kuchma has been a strong defender of Ukrainian sovereignty.

The broad western backing buoyed Mr Kuchma. In a speech before the Western European Parliamentary Assembly in Paris this month, he said financial and political support from abroad ensured Ukraine would not "disappear from the political map of Europe". But he cautioned: "It is not possible to build a system of security in Europe without Russia."

The unstated threat to stability, in Ukrainian eyes, remains Russia. Mr Udovenko expects increasing Russian pressure on Ukraine for closer political and military links regardless of who wins the Russian elections next week. He said Ukraine wants to "integrate" with Europe and enjoy "good normal relations" with Russia - a semantic about-face for Ukraine since last year.

Ukraine's initial ambivalence about its future has been clarified. But the choice may not be theirs entirely. Many Russian analysts believe the Ukrainian elite will naturally gravitate back to Moscow, for the economic and cultural bonds are too strong to break.

# French jobless rate near record

By David Owen in Paris

The French government suffered a new setback yesterday when it emerged that unemployment had risen to within a whisker of its highest ever level.

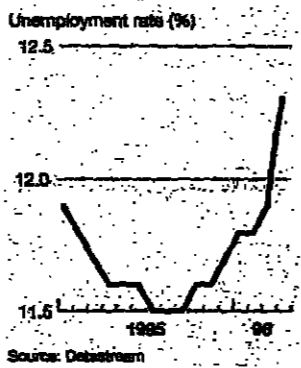
New figures released by Insee, the national statistics institute, put the number of people out of work in April at 3.145m - just 11,000 less than the record of 3.156m set in March 1994. This put the unemployment rate at 12.3 per cent, among the highest in the G7 group of industrialised nations.

The worrying news on unemployment coincided with release of separate figures showing household consumption fell in May for the fourth consecutive month. The rate of decline, however, slowed significantly to just 0.1 per cent from a downwards revised 1.5 per cent in April. Insee said the marginal nature of the latest fall indicated that consumption was stabilising.

Taken together, yesterday's figures underlined the difficulty of the task facing the government of Prime Minister Alain Juppé as it seeks to stimulate growth while keeping public spending under tight control. Although gross domestic product grew by 1.2 per cent in the first quarter, analysts predict a reversion to close to zero growth in the three months just drawing to a close.

Mr Juppé recently resorted to the promise of future income tax cuts in an effort to encourage consumers to spend more. But the new unemployment figures will reinforce analysts' expectations that such spending is likely to remain subdued for the foreseeable

France



future, especially at a time when scarcely a week passes without the announcement of large-scale job losses in one sector or another.

Yesterday's figures came as Mr Jacques Barrot, labour minister, suggested that France's system of unemployment benefit should be structured so as to encourage the jobless to look for work more actively.

Meanwhile, the government also confirmed that France's minimum wage - the "smic" - would be increased by 0.5 per cent from July 1. This will carry the net monthly minimum salary over the FF5,000 (\$965) threshold from FF4,992.99 at present.

The 12.3 per cent unemployment rate released yesterday compared with a previous estimate of 11.9 per cent and followed an annual household survey conducted in March. The survey used international labour standard methods of calculation and, as such, differs slightly from French labour ministry data showing the number of job seekers.

# Banker refused entry to Russia

By John Thornhill in Moscow

Mr Boris Jordan, the best known foreign banker in Russia, has been denied re-entry to the country after his visa was stripped from him when leaving Moscow airport in May.

The move has unsettled foreign investors in Moscow who fear it is directly linked to a shareholder tussle at one of Russia's biggest industrial plants.

Many Russian company directors, who are often former Communist party members with good contacts in Moscow ministries, still view outside investors with hostility. There are few legal mechanisms for enforcing shareholder rights.

The investment bank Mr Jordan heads, Renaissance Capital, has recently been in confrontation with the Soviet-era managers of the Novolipetsk

Metallurgical Kombinat after the bank acquired a 24 per cent stake in the metals plant and pressed for more financial information to be disclosed and auditors to be appointed.

Mr Jordan had been trying to assert the shareholder rights of investors, who collectively own 44 per cent of Novolipetsk's equity.

"There is no legitimate reason for Boris to lose his visa so the most likely conclusion is that one of the 'red directors' of the plants in which Renaissance is involved in a contentious restructuring has put an obstacle in Boris's path," a bank official said.

Russian officials have refused to explain why Mr Jordan's visa was revoked. But the Renaissance bank official said Mr Jordan was hopeful of receiving a new visa once political tensions eased after next week's presidential elections.

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NEWS: INTERNATIONAL

Zulu heartland yields to death and democracy

The derelict school at Shabashobane, a hilltop village on the south coast of KwaZulu Natal, will be busy today for the first time this year...

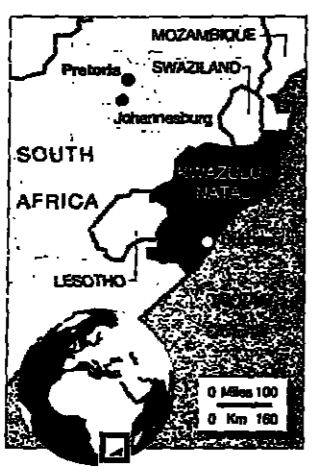
ism that swept South Africa in 1994 election has made little impact on KwaZulu Natal, which remains the only part of the country where elected politicians still dispute the case for democratic government.

Over recent months many of the province's 3.5m voters have had a first taste of electioneering - an experience curtailed in April 1994 when the Inkatha Freedom Party threatened to boycott the all-race general election until the week of the poll.

ships on their outskirts. It was the final tier of apartheid government to go, but boundary disputes and recurrent violence brought two postponements in KwaZulu Natal.

For many voters, the campaign has brought little cause for optimism. News of a peace initiative led by rival leaders of the ANC, which won a slim majority in the province in 1994, is greeted with scepticism in Shabashobane.

The spirit of political pluralism that swept South Africa in 1994 election has made little impact on KwaZulu Natal...



Germany isolated over IMF gold sales

Germany is alone among the Group of Seven leading industrial nations in remaining firmly opposed to the sale and reinvestment of International Monetary Fund gold to help fund debt relief for poor countries...

Germany is alone among the Group of Seven leading industrial nations in remaining firmly opposed to the sale and reinvestment of International Monetary Fund gold...

Officials fear the summit may now end in a stalemate on debt relief. Germany will argue that it is prepared to offer fresh bilateral money, but not to sell IMF gold.

Officials fear the summit may now end in a stalemate on debt relief. Germany will argue that it is prepared to offer fresh bilateral money, but not to sell IMF gold.

But President Clinton is likely to point out that the administration has been committed to funding operations such as the World Bank's soft-loan arm, the International Development Association...

creditor governments on the size of the contribution it should make to the World Bank/IMF debt initiative.



Netanyahu remains vague on peace deal

Mr Benjamin Netanyahu, Israel's prime minister (above left), yesterday left Mr Warren Christopher, US secretary of state (right), guessing about his commitment to international Middle East peace accords...

He also remained vague about his government's willingness to deal directly with Mr Yasir Arafat, president of the Palestinian Authority and, according to officials, he told Mr Christopher he wanted to review the framework of Israel's negotiations with Syria.

Mr Christopher's visit followed a weekend Arab summit in Cairo which warned Israel against deviating from the land-for-peace principle and came ahead of Mr Netanyahu's first visit to Washington as prime minister next week.

Global privatisation may raise up to \$85bn in 1996

Receipts from global privatisation issues are expected this year to surge to their highest ever levels, according to a report published yesterday by the Organisation for Economic Co-operation and Development (OECD).

from Germany, where the government is expected to raise \$10bn from new shares in Deutsche Telekom, predicting overall proceeds for Germany of \$16.5 bn.

are to be achieved". The report says that international investors have become increasingly important buyers of privatisation stocks.

Global privatisation issues are expected this year to surge to their highest ever levels, according to a report published yesterday by the Organisation for Economic Co-operation and Development (OECD).

Oil price alert on Saudi state finances

Robin Allen on the likely end to a revenue bonus

The return to world markets of Iraqi oil in the next few months threatens to bring prices down and disrupt the finances of the world's biggest oil exporter, Saudi Arabia.

cash reaped from buoyant oil prices has had little impact on domestic debt, fuelled by accumulated budget deficits and the government's failure to cut state subsidies.

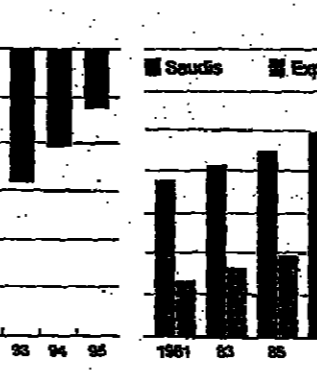
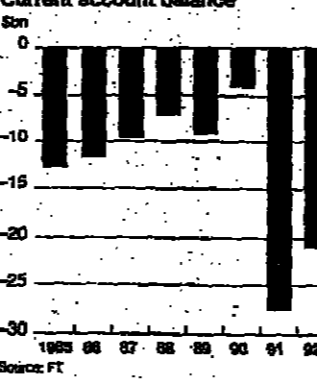
Increasing numbers of foreign workers means expatriate remittances are likely to be more than the \$15bn reckoned by the International Monetary Fund to have left the country for each of the last four years.

But even these "optimists" point to critical structural imbalances in the country's economy, and all agree that "no one seems to know where this year's extra oil revenue has gone".

But even these "optimists" point to critical structural imbalances in the country's economy, and all agree that "no one seems to know where this year's extra oil revenue has gone".

At that rate, water consumption will double every eight years. For lack of payments for past work and future financing, vital projects face delays.

Saudi Arabia workers from abroad add to economic pressures



mat put it. This year the deficit is projected at \$5bn. To limit the deficit to this level, the government has pruned expenditure on defence and security by 8.3 per cent compared with last year, to \$12.1bn.

In April and May the government made a second, SR6bn (\$1.6bn), bond issue to settle overdue debts to state contractors and suppliers.

budget revenue goes to meet the public sector wage bill alone. Meanwhile, Saudi officials at the Opac meeting earlier this month were adamant that pessimistic oil price forecasts fall to take account of a number of positive factors that could underpin oil markets for much of the rest of the year.

UK team heads for Tokyo in copper probe

By Jimmy Burns and Norma Cohen in London

A three-man team from Britain's Serious Fraud Office flies to Japan today to step up the investigation into the Sumitomo copper affair.

The three men are expected to interview Sumitomo's counterparties to learn more about the terms of certain transactions.

Regulators suspect that Mr Hamanaka was able to hide the losses from his superiors partly because Japanese accounting rules do not require that positions be "marked to market".

In order to ensure that the option not only raised cash but was profitable as well, he "would have had to ensure that copper prices moved so that the option would be out of the money at the time the option expired", according to one copper market regulator.

INTERNATIONAL NEWS DIGEST

WHO warning on TB drugs

The World Health Organisation yesterday warned that the misuse of drugs to treat tuberculosis in South Africa could result in the spread of a new and incurable epidemic to continental Africa and the developed world.

"If we don't act now, we will have a situation that we can't control," said Dr Donald Enarson, a director of the Paris-based International Union Against Tuberculosis and Lung Disease.

UK proposes improved links between global regulators

The UK will propose a scheme to improve co-ordination between national regulators of global financial institutions at this week's summit of the Group of Seven leading industrial nations in Lyons, France.

Many international financial businesses are now subject to scrutiny by a large number of regulators in different countries. The UK proposal would see a "convening regulator" appointed for each business, which would be responsible for initiating and co-ordinating the response of all the affected regulators in the event of a crisis.

Burundi president and PM call for help to end tribal warfare

Burundi's president and prime minister yesterday put aside their ethnic differences and called for help in ending the tribal fighting that has killed 150,000 people.

"We have said that we are not for an intervention force imposed from the outside," said Mr Antoine Nduwayo, the Tutsi prime minister. "But... we have identified needs that are great, and the government of Burundi is requesting this assistance."

## Brazil's banking 'riskiest in region'

By Stephen Fidler, Latin America Editor

Brazil has the riskiest of all the main Latin American banking systems, according to a report issued this week by the US credit rating agency Standard & Poor's.

The report, which is likely to be strongly disputed in Brazil, says: "Investors, counterparties and large depositors remain at risk when dealing with small banks in Brazil or banks with a weak financial profile and poor franchise value."

It adds: "There are five banks in Brazil, although fewer than have regularly issued in the euromarkets." Among the top-tier banks named are Bradesco, Itaú and Unibanco.

Brazil's authorities have long maintained that, while the country has problem banks, there is no systemic problem. Standard & Poor's points out that, apart from that in Chile, the systemic risk in all Latin American banking systems is high.

Mr John Chambers, one of the authors of the report, said that, while the Mexican banking system might appear to be in a worse condition than Brazil's, Mexico was, unlike Brazil, at the trough of its credit cycle. "We wouldn't say that Brazil is in worse shape than Venezuela, but I guess we don't consider Venezuela to have a major banking system," he said.

The Brazilian system's weaknesses derive from several sources, the report says. There is no system as yet to share loans and no shared national credit system, although the central bank is developing one.

Furthermore, among the main Latin American systems, Brazil alone still requires private sector banks to allocate a portion of certain liabilities to sectors deemed to be starved of capital.

High reserve requirements also discourage banks from seeking stable sources of funding.

## Dole takes initiative on TV poll plan

By Jurek Martin in Washington

Mr Bob Dole has stolen a march on President Bill Clinton by agreeing, with conditions, to a new proposal for presidential candidates to deliver short political speeches on free time donated by the TV networks immediately before the November elections.

But the presumed Republican presidential candidate yesterday found himself under attack from Vice-President Al Gore for "sweeping under the rug" more widespread changes in the way US election campaigns are financed.

The Dole campaign accepted on Monday night the blueprint proposed by the Straight Talk Coalition, the lobby headed by Mr Walter Cronkite, the leg-

endary and now retired TV anchorman. Its aim is to reduce the impact of "sound bite" reporting of elections and negative TV political commercials by permitting candidates to address the public directly in prime evening viewing time.

Mr Dole would deliver 10 two and a half minute mini-speeches, to be broadcast on alternating nights in the final four weeks of the campaign. Mr Clinton has expressed interest in the proposal, which would also be open to Mr Ross Perot or the nominee of his Reform party, but he has yet formally to respond. The only important condition Mr Dole stipulated was that Mr Clinton not give his speeches from the White House Oval Office because that was

where "the president of the United States addresses the nation in times of national emergency".

All the major networks have agreed to the plan in principle, with details still to be arranged. Mr Dole and Mr Clinton are also expected to take part in at least one head-to-head televised debate, a feature of US campaigns since the Nixon-Kennedy series in 1960.

Mr Gore's criticism yesterday came as the Senate began debating another version of campaign finance reform, though the threat of a Republican filibuster left the bill with little chance of passage. Just over a year ago, Mr Clinton and Mr Newt Gingrich, the Speaker of the House of Representatives, had shaken hands and promised to deliver

within 12 months a reform bill that would lessen the influence of special interest money on political campaigns.

Mr Gore tartly remarked that Mr Dole clearly believed that "silence is golden because the less he says, the more special interest money he receives". That recalled Mr Gore's attack of last week when he accused Mr Dole of being in the pocket of the tobacco lobby.

The Senate bill, which has sponsors from both parties, does not propose the complete public financing of elections. But it recommends voluntary state-by-state spending limits and free TV time and would severely limit contributions by political action committees, the device used to skirt restrictions on individual campaign donations.

## New head of steam for a slow sell-off

Raymond Colitt analyses the prospects for companies in Venezuela's privatisation programme

With investor confidence rising, after the launch of an economic plan backed by the International Monetary Fund, the Venezuelan government says it is determined to restart its privatisation programme.

Privatisation was held up for more than two years by an unenthusiastic government and by an economic crisis which depressed Venezuelan asset prices and made privatisation unattractive.

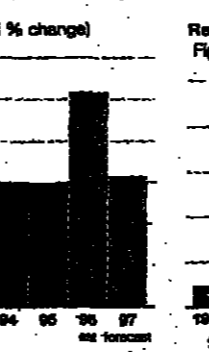
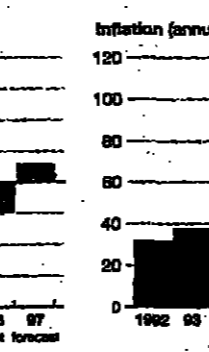
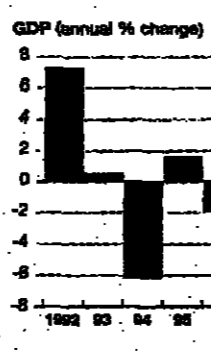
The delays have left more than a residue of scepticism. According to Mr Antonio Herrera of the Venezuelan-American Chamber of Commerce, "the privatisation plan has been delayed for so long that it lacks credibility until it actually happens."

However, a growing number of observers believe that the government means business this time. Mr George Kastner, head of Arthur D. Little in Caracas, said: "Long-term investment conditions are improving and I'm very bullish in advising foreign investors about prospects for privatisation."

Government estimates suggest it could raise as much as \$3bn by year-end. The first step will be the sale of Banco de Venezuela, which fell into state hands with more than a dozen other banks after the 1994 banking crisis. Softline Consultants now ranks it third in terms of total deposits.

Mr Gilberto Carrasquero, Venezuela representative of Salomon Brothers, lead man-

### Venezuela: the economic framework for privatisation



ager in the bank's sale, says prequalification of interested buyers is under way. The base price will not be made public, in hope of boosting the bidding price. Bank officials say the bank has a book value of 43bn bolivars (\$91m).

Most important in terms of potential revenues is the government's 49 per cent share in the telecommunications company, CANTV, of which a GTE-led consortium acquired a 40 per cent share in 1991 for \$1.89bn. Lehman Brothers and S.G. Warburg, acting as investment banks, are preparing financial and legal audits before a road show for potential investors in the autumn.

A first tranche of shares, about 34 per cent, is to be offered on domestic and international markets in the last quarter this year, when the government sees an opportunity between the sales of the

Peruvian and German telecommunications companies.

The government expects as much as \$2bn from the share package, proceeds of which will be used to pay off foreign debt, possibly that of the state aluminium companies so as to help their privatisation.

In 1994 and early-1995, CANTV had debt problems because of a shortage of foreign currency as well as low telephone tariffs. More recently the company has performed well, with a 1995 profit. Its debt to creditor banks was reduced by the end of last year. Mr Kastner says the company has also improved its services and labour relations. Already 11 per cent of the shares are in the hands of employees, who will have the option to buy another 9 per cent.

Officials of the privatisation entity, Fondo de Inversiones de Venezuela (FIV), are aware

that time to sell off the remaining stake in CANTV is running out. In 2000, CANTV's monopoly on fixed lines and long-distance telephone service is to run out.

Also slated for privatisation in the last quarter this year are four aluminium companies, part of the state industrial holding company Corporación Venezolana de Guayana (CVG). Venezuela's low fuel costs and extensive infrastructure, along with strong international aluminium prices, make the sector (one of the most important non-petroleum industries with annual exports of more than \$700m) attractive to potential foreign buyers.

Yet, while analysts see the sale of Banco de Venezuela and even CANTV before the end of the year as feasible, they have doubts about the aluminium complex's timetable. The four companies' high

debt, at some \$1.37bn, is a problem. It is still unclear whether - and, if so, how - the government will assume these liabilities. However, the FIV is discussing options with its advisers, the brokers Merrill Lynch, Mr Alberto Poletto. FIV head, said the government is determined to offer the companies in as good a condition as possible: "It's like selling a car - you're likely to get a better price if you change the tyres and give it a new coat of paint."

Opposition by entrenched bureaucrats could also delay the sale of CVG subsidiaries.

"Everyone is in favour of privatisation until it begins to affect the privileges of certain people. I spend a good deal of my time trying to convince our opponents," said Mr Poletto.

Until a new legislative framework is in place some time next year, the planned sale of the two electricity utility companies, Enelbar and Enelven, will not go ahead. The privatisation of the steel company, Sidor, and the iron concern, Fesivel, are also scheduled for next year. Even if privatisation does not advance according to the timetable, many analysts say there is no turning back.

Mr Pedro Palma, vice-president of Booz Allen & Hamilton, said: "The government realises that privatisation is the only way to reduce substantially the public debt service." This, he said, accounts for 7 per cent of gross domestic product.

## CEO pay rises average 23%

The pay of US chief executives continued to outpace that of the national workforce last year, with an average rise in chief compensation of 23 per cent. This brought the average chief executive's remuneration - including base salary, bonus and stock options - to \$3.2m.

The latest annual survey by management consultants Towers Perrin said the median CEO base salary had risen 7 per cent to \$805,000, while the median bonus had gone up 16 per cent to \$725,000. Long-term incentive payments, consisting of stock awards such as options, were worth an average \$1.4m. Total incentive payments, including the annual bonus, made up 68 per cent of total compensation, compared to 55 per cent six years ago. The survey, based on the proxy statements of 230 companies, also showed a sharp rise in CEOs' ownership of stock in their own companies. On average, such holdings were worth eight times base salary, compared with five times two years ago.

## US consumer confidence down

US consumer confidence fell unexpectedly this month but remained higher than in June last year, figures indicated yesterday.

The Conference Board, a US business group based in New York, said its confidence index had fallen to 97.6 against 103.5 in May. This surprised Wall Street economists who had predicted little change, given recent reports of rapid employment growth and buoyant retail spending.

Some analysts said the decline was consistent with projections of slower economic growth in the second half of this year after a robust second quarter. But it may have just reflected the volatility of the index, which has fluctuated between 88 and 106 in the past six months. Historically a reading of 90 to 100 has indicated steady economic growth. Separate US figures yesterday showed a 1.4 per cent rise in sales of existing homes in May over April, higher than most analysts had expected.

## Alberta eases austerity

Alberta's conservative government has begun to loosen the purse strings after four years of fiscal austerity that has helped turn the oil-rich Canadian province's C\$3.4bn (US\$2.5bn) deficit into a C\$1.1bn surplus.

The surplus for the year ended March 30 was more than double original estimates, thanks largely to booming tax revenues from the oil and gas industry.

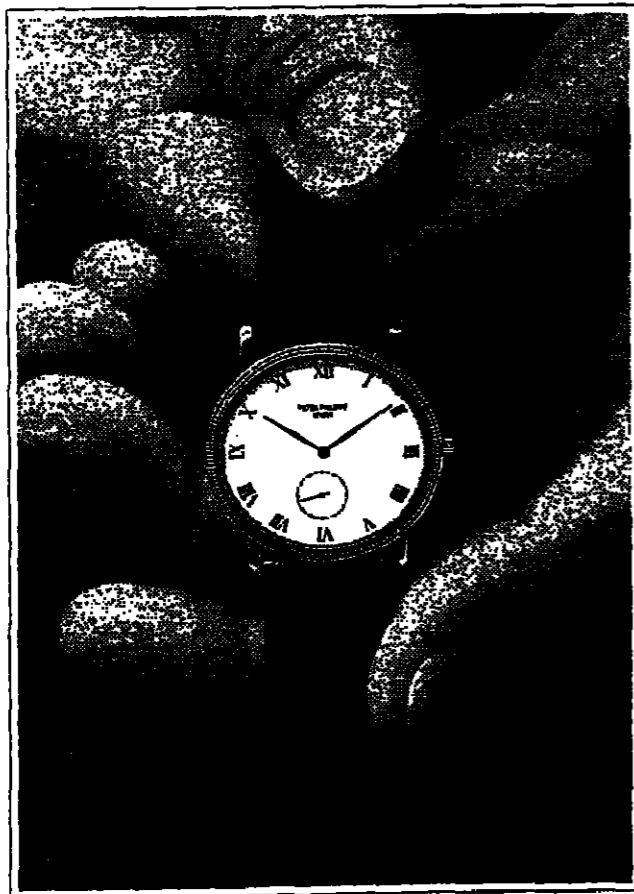
Based on a voter survey, the government will use most of the surplus to start paying down the province's debt. Mr Jim Dinning, provincial treasurer, said spending on health care and education would rise by extra C\$340m during the next two years.

## Peruvians buy into telecoms

Peru's first big attempt at promoting popular capitalism seems to have been a success. By last weekend, and with only three days to go, almost 160,000 Peruvians had acquired packages of shares in the former state-owned telecommunications company, Telefonía del Perú, under a "citizen participation" mechanism, double the target figure.

Investment pledged by small investors totals the equivalent of some \$215m, latest available figures said. The larger, international tranche of the Telefonía del Perú offering is being finalised by global co-ordinators JP Morgan and Merrill Lynch. The final offer price is to be announced on Monday.

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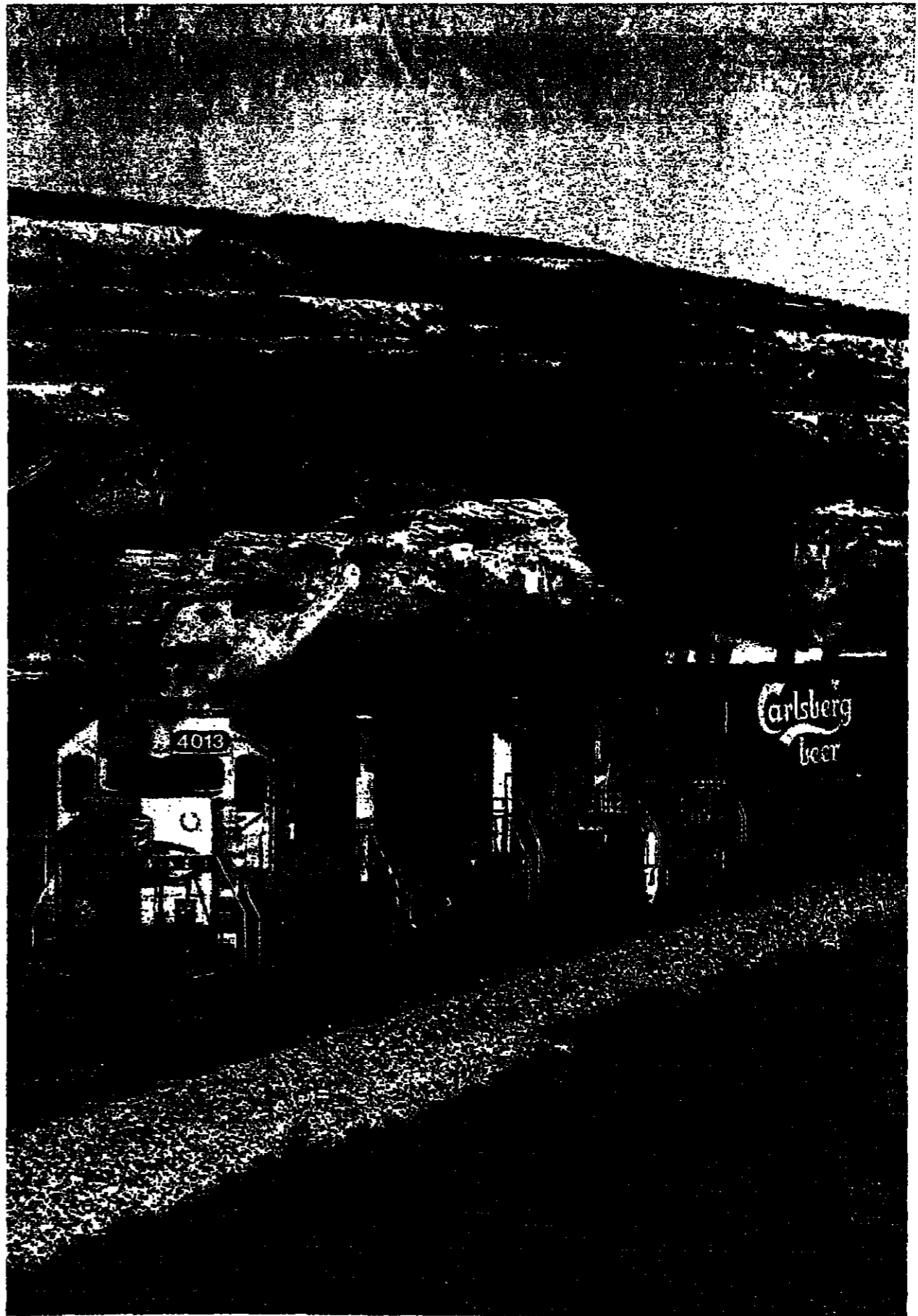


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INSURANCE & INVESTMENT

NEWS: WORLD TRADE

US hurdle for BA-American deal

By Michael Stapleton, Aerospace Correspondent

As negotiators from the UK and the US met in Paris on Monday for preliminary discussions on a new "open skies" agreement and the proposed alliance between British Airways and American Airlines...

too dominant on the transatlantic routes. They have received support from airlines in other countries. Mr Richard Branson, chairman of Virgin Atlantic of the UK, is in Washington this week attempting to gain US government support for his opposition to the alliance.

link-up is in the interests of consumers. But opposition from US carriers is a worrying development for them. Airlines such as TWA have in the past used their political influence to persuade the US to veto new air agreements with the UK.

when it formed an alliance with BA in 1993 - although this argument is slightly weakened by the fact that the USAir routes were taken over by BA. United is the most surprising of the opponents as it has just received anti-trust immunity for its own alliance with Lufthansa of Germany.

Bolivia to sign free trade pact with Mercosur

By David Pilling in Buenos Aires

Bolivia is to join Chile in signing a free trade deal with the four-nation Mercosur customs union. President Gonzalo Sanchez de Lozada said yesterday the accord had been agreed.



Sanchez de Lozada: helping Bolivia export goods not drugs

imported \$500m worth of goods from Brazil but legally exported only \$20m to that country. "That's a slight difference," he said. "Our advantage in this new relationship (with Mercosur) is that we cannot do worse."

Mr Antonio Arambar Quiroga, Bolivia's foreign minister, said lists of exceptions would cover mainly agricultural products, where tariff reductions would be phased in over 18 years.

Boeing forecasts strong growth in Asia

By Tony Walker in Beijing

Boeing, the US aircraft manufacturer, yesterday said it expected business in Asia to grow strongly in the next 10 years, with deliveries accounting for 40 per cent of total aircraft sales.

of total aircraft sales in the next 10 years which would make it the single largest market in the world, and China is a significant part of it," he said.

agreement had not, however, undermined Boeing's world market share which remained "intact". Airbus's success in China was at the expense of McDonnell Douglas.

China has had a \$1bn-\$2bn order pending for 20 new Boeing aircraft since last year, but Beijing has delayed a decision partly, it seems, because of lingering political difficulties with the US over trade and human rights.

of the proposed venture is to produce up to 1,000 100-seat aircraft. A European consortium, involving Aerospaciale, British Aerospace and Italy's Alenia is believed to be the leading contender among western aircraft manufacturers.

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WORLD TRADE NEWS DIGEST

Banks pioneer Shanghai deal

Banks yesterday completed a pioneering financing package for a \$7m Sino-UK joint venture in Shanghai. The deal is one of the first in China which is not underpinned by a foreign exchange guarantee from a financial institution...

Kantor plea on S Korea tariffs

US commerce secretary Mickey Kantor yesterday urged South Korea to open its markets for vehicles, telecommunications equipment and agricultural products. Mr Kantor also stressed the need for Seoul to protect intellectual property rights.

EU applies to lend to Vietnam

The European Investment Bank, a European Union bank that funds capital investment projects on a non-profit basis, has approached Hanoi about extending its operations to Vietnam.

Indonesia's state-owned Garuda airlines yesterday signed a \$1.6bn order for the purchase of 23 Boeing aircraft.

Bombardier, the Canadian transport equipment group, said its Eurostar unit would build 18 metropolitan two-car train units worth \$288m (US\$364.4m) for RST of Rotterdam.

CAE, the Canadian electronics group, has won a \$210m order for four helicopter flight simulators for the German Army Aviation School for 1999 delivery.

Telstra New Zealand, a unit of Australia's Telstra Corp, and Telecom New Zealand have signed an interconnect agreement covering national and international toll services.

Albania takes direct line to European integration

Kevin Done on a growing mobile phone network

Albania, the poorest country in Europe, has inaugurated its first mobile telephone network in an attempt to overcome the shortcomings of its limited conventional telecommunications service.

Albania, isolated from the world for 45 years by the repressive Stalinist regime of Enver Hoxha, has the most underdeveloped telecommunications system in Europe with less than 1.5 lines per 100 inhabitants compared with 49 in the UK and 68 in Sweden.

Albania is investing to improve its conventional telecommunications system, but the building of a mobile telephone system "allowed a very quick, very high rate of expansion", said Mr Shehu.

System will be out of reach of all but a small minority

The cellular network, confined initially to the capital Tirana, is being extended to cover many of the cities along the country's western coastal plain.

network to speed up the development of communications to serve the growing private sector business community. A feasibility study has also been launched into banks using the system for data transmission to overcome the absence of conventional computer links with their branch networks.

Mr Shehu said a decision would be taken during the summer on the second phase which would need a further \$15m investment to expand the network by the end of the year to cover 75 per cent of the population. It is planned to take in the main roads to the south and south-east of Albania towards the Greek and Macedonian borders to include towns such as Elbasan, Korca, Gjirokastra and Saranda.

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# Labour leader deplores 'isolationism'

By John Kampfer, Chief Political Correspondent

The opposition Labour party yesterday set out a strategy to raise Britain's international profile by using its unique membership of the Commonwealth, the European Union and the United Nations Security Council.

Mr Blair deplored the "isolationism" of the Conservative government, which he said had led to a decline in Britain's international standing.

Mr Blair said Labour would work from within the EU to promote free trade and to take a "far more vigorous approach" to opening up the single market.

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# Industry minister backs free trade

By Robert Peator, Political Editor

The promotion of competition and free trade are once again the core aims of the Department of Trade and Industry, Mr Ian Lang, its chief minister, will say today.

# Security of top landmarks to be privatised

A private sector security company could soon be protecting many of London's most sensitive landmarks - including the Home Office, the Treasury, St James's Palace and the Tower of London - under plans unveiled by the government last night.

# Opposition MPs urge cut in farm minister's pay

By James Harding at Westminster

Ministers yesterday rallied to support Mr Douglas Hogg, the agriculture minister, as the House of Commons debated his handling of the beef crisis and a proposal to cut his salary by £1,000 (£1,850).

Mr Paul Tyler, Liberal Democrat agriculture spokesman, justified the call for a cut in Mr Hogg's pay so that "the long-suffering beef and dairy industry should at least have the satisfaction of knowing that somebody is being held accountable for their undeserved suffering".

Mr Hogg said he had worked flat out for three months to try and resolve this crisis, Mr Hogg said.

# Dutch reject plea for rendering aid

By Gordon Cramb in Amsterdam

British options for disposing of the country's hundreds of thousands of condemned cattle narrowed yesterday when the Dutch government said it would not permit the shipment of carcasses to the Netherlands for rendering and incineration there.

However, a law governing the destruction of animals gives the Dutch health ministry power to refuse permission for any such operation, whether or not the European Union ban on exports of British beef is adjusted to allow such a cargo to leave UK shores.

# Engineering lifts manufacturing gloom

By Peter Marsh in London

Mulling over the latest manufacturing statistics, Mr David Shall shakes his head with disbelief. The chief of the UK division of Sandvik, the Swedish engineering company, does not recognise the official picture of a slowdown in manufacturing pushing the sector into recession.



Specialist tool operations at Sandvik's Coventry plant are boosting the Swedish company's growth

demands, according to Mr Martyn Vaughan, the director of a tractor plant in Basildon, Essex, run by New Holland, a subsidiary of Fiat of Italy.

# Nike's knack is to pick losers for its advertising

By George Parker in London

It is being called "the curse of Nike". The US sportswear company's unfortunate choice of top stars to promote its products is fast becoming a standing joke after a string of disasters spanning the Olympics, the Wimbledon tennis championships and the Euro 96 soccer tournament.

view - the world of sport is unpredictable. If Nike is embarrassed, it is not showing it. Yesterday the company launched a tongue-in-cheek newspaper campaign in advance of today's semi-final between England and Germany, acknowledging the "curse".

# Soccer success gives workers a kick

By Peter Marsh in London

Factories in England can expect a boost to production and quality tomorrow if the nation's soccer players win against Germany tonight - that is the verdict from a squad of production managers assembled by the Financial Times to test out theories about links between sports prowess and output.

enhanced in England in the past two weeks since the football side began its unexpected advance to the semi-final of the Euro 96 competition.

MPs yesterday attacked the "jingo journalism" and "anti-German nonsense" in some British newspapers in the run-up to tonight's Euro 96 soccer semi-final between England and Germany at the Wembley stadium.

House of Commons motion deploring the "nonsense" in the press. They contrast "the hooligan atmosphere" of press comment recently with the sporting enthusiasm of the fans who have "set a much better example of English fair play".

# Mobile phone coup boosts 'Cambridge phenomenon'

The Technology Partnership, which this week announced worldwide acceptance for its proprietary mobile phone technology, is one of a group of innovative companies in eastern England collectively responsible for the "Cambridge phenomenon".

Its contribution to the remarkable growth of high technology entrepreneurial activity in the East Anglia region began in 1988, when 24 engineers and managers led by Dr Gerald Avison agreed to form a contract research partnership. Many of them had previously worked for PA Technology, one of the first "Cambridge phenomenon" companies and a hotbed of wireless expertise.

Revenue last year was £25m (£38.25m) and it expects to turn over between £30m and £35m this year. Its shareholders are CINVEN (13 per cent), 3i (9 per cent), Vision Systems (8 per cent) and its employees (70 per cent).

Dr Tony Milbourn, computers and communications division manager, explained that the association with Analog Devices, a world-class company, gives the Partnership a recognition that a small Cambridge company would find hard to achieve on its own.

The group's involvement in mobile radio began in 1989 through the development of analogue cellular phones for Ericsson of Sweden, now the world leader in cellular systems.

Dr Tony Milbourn, computers and communications division manager, explained that the association with Analog Devices, a world-class company, gives the Partnership a recognition that a small Cambridge company would find hard to achieve on its own.

# Law change heralds divorce rush

Worried husbands are rushing to start divorce proceedings against their wives in an attempt to beat the introduction next week of tougher regulations on the treatment of pensions on divorce. After July 1, courts will be required to take pension funds into account in deciding divorce settlements and will be able to force part of a pension to be paid to a former wife or husband.

The most likely losers from the new rules will be husbands who have built up large pension funds and who are divorcing wives with little or no pension arrangements. Divorce proceedings started before the end of this week are unaffected by the new rules.

# Minimum wage plans strengthen

The opposition Labour party is likely to put its plans for a minimum wage at the centre of its legislative programme for its first year in office. Senior party officials said yesterday recent soundings from employers and financial institutions had become considerably less hostile to the idea.

# British Gas egm proposed

Leading institutional shareholders are considering calling an extraordinary general meeting at British Gas as a protest against the pipeline charges being proposed by Ofgas, the industry regulator. The egm would enable investors to change British Gas's own rules to prevent its directors from approving any investment which yields a return below, or the same, as that allowed by Ofgas.

# Environmental concerns backed

The House of Commons' environment committee yesterday urged the British government to support the European Commission's controversial proposals to amend free trade rules to prevent them from undermining global environmental accords. It also backed thorny demands by environmentalists to be admitted as observers to negotiations of the World Trade Organisation, the successor to Gatt.

# Correction: Mr Ron Baker

We reported yesterday that Mr Ron Baker, formerly head of the financial products group at Barings, has been banned by the Securities and Futures Authority from working in the City of London for three years, and is appealing against that ban.



Tony Milbourn: "Association with US company aided global recognition"

## BUSINESS AND THE ENVIRONMENT

It was hailed by Brussels as a new, non-confrontational way to frame environmental legislation - the European Commission, vehicle manufacturers and the oil industry would work together to tackle road transport's contribution to air pollution.

An unprecedented three-year collaboration known as the "Auto Oil" programme led to the commission's adoption last week of proposed legislation for cleaner fuels and tighter curbs on vehicle emissions.

But there was disagreement even before the ink was dry on the proposals - presented yesterday in Luxembourg to EU environment ministers by Ritt Bjerregaard, environment commissioner. During the past months, relations between the three sides have deteriorated as it became clear that the car industry would have to foot most of the bill.

The commission instigated the Auto Oil programme in 1993, when it became clear that future air quality targets being considered by the World Health Organisation would require drastic cuts in emissions.

Road transport is a leading source of pollutants such as carbon monoxide (CO), nitrogen oxide (NOx), benzene and ozone, which contribute to smog in cities and have an adverse effect on health.

The idea was for the commission and the two industries to work together on the most cost-effective approach for tackling this pollution. The commission would then devise standards for 2000, to meet the new air quality targets by 2010.

By working together in this way, EU officials hoped to avoid the political and furious industry lobbying that occurred when new fuel and vehicle specifications were introduced in the US under the 1990 Clean Air Act.

The car and oil industries, delighted at the chance to influence Jacques Calvet is not amused. Nor are the heads of Europe's other leading vehicle producers which, along with Calvet's Peugeot Group, make up the European Automobile Manufacturers Association.

As the association's president, Calvet points out that vehicle makers have borne since 1970 a large financial burden in cutting emissions of carbon monoxide, hydrocarbons and oxides of nitrogen from car exhausts by 90 per cent. In the same period, truck diesel emissions of NOx have fallen by 65 per cent and of sooty particulates by 85 per cent.

Yet now the car industry must spend Ecu4.1bn a year for the next 15 years cutting current exhaust emissions by a further 20 to 40 per cent from 2000, with additional costs for the second step to apply from 2005.

On Europe's average annual

A European joint initiative to cut vehicle pollution has split over fears about costs, writes Lucy Plaskett

## Airing the differences

future legislation, invested Ecu10m (€8m) in a joint research project, the European Programme on Emissions, Fuels and Engine Technologies (EPFETE).

At the same time, commission officials assessed the scale of the pollution problem by studying the air quality of seven European cities - Athens, Cologne, The Hague, London, Lyons, Madrid and Milan.

This research threw up two important results: first, that while existing legislation would bring levels of CO and benzene below the target limits by 2010, the real problem was how to deal with NOx, particulates - sooty particles largely caused by diesel exhausts - and ozone.

Second, the studies appeared to show it was possible to have a greater impact on emissions by varying vehicle technology than by improving fuel.

The recently-adopted legislation reflects these results. But devising it prompted conflict within the commission: the environment directorate advocated stricter standards, while the energy and industry directorates opposed them because

of concerns about the effect on oil refiners and carmakers.

The package consists initially of two measures - a proposal to cut emissions from cars, and another to improve the quality of petrol and diesel fuels. Further initiatives to limit emissions from vans and heavy-duty vehicles will follow next year, along with tougher inspection and maintenance tests.

The commission estimates the total cost of the package will be Ecu5.5bn a year for the next 15 years, with an annual Ecu4.1bn falling on vehicle manufacturers.

Exhaust emissions of CO, hydrocarbons, NOx and particulates must be cut by 20 to 40 per cent from 2000. Complying with the legislation is set to cost car producers Ecu2.4bn a year, and van producers and heavy-duty vehicle manufacturers Ecu3.1bn and Ecu575m a year respectively.

Car and van producers will also share an annual cost of Ecu706m to fit on-board diagnostics - equipment that monitors the performance of catalytic converters. By contrast, the cost to the oil-

New targets in drive to cut emissions

Year	Carbon monoxide	Hydrocarbons	Nitrogen oxides
2000	2.30	0.25	0.15
2005	1.00	0.10	0.08
2010	0.50	0.05	0.05

refining industry will be just sulphur in diesel and petrol to 350 parts per million (ppm) and 200ppm respectively.

As well as cutting other pollutants, refiners will also have to phase out leaded petrol by 2000, with a possible three-year extension for southern member states, such as Spain and Portugal.

The commission believes that the actual cost to the consumer of the whole package will be small, with the changes to the car putting between Ecu200 and Ecu500 on to the cost of each vehicle, and the fuel improvements adding, on average, a minimal Ecu1.7 to Ecu2.3 to a motorist's annual fuel bill.

But the cost to both industries will be significantly increased by a proposed second round of emission cuts to apply from 2005. Under this "second step", vehicle emissions will have to be reduced by 50 to 70 per cent from present levels. Fuels will also have to be

improved, with further cuts in sulphur, to enable new vehicle technologies to work effectively. While there are plans to consult industry again before bringing out these new standards by December 1998, the commission already estimates the second step will cost vehicle manufacturers a further Ecu2.7bn a year, and oil refiners an extra Ecu2.25bn.

After three years of collaboration, car producers argue they have been unfairly burdened with most of the clean-up costs, and ACEA, the European vehicle manufacturers' association, is calling for "balanced contributions" from both industries.

It says cleaner fuels would have an immediate impact on emissions, while changes to vehicle technology would take years to permeate the vehicle fleet.

But the oil industry, which supports the measures, counters that they are in line with the Auto Oil conclusions. "The car industry cannot deny that what the commission has proposed is in line with the

study," says Europa, the European oil industry association.

Both industries, however, are united in their opposition to tighter limits from 2005 without further rigorous cost-benefit analysis. Car producers believe fiscal incentives would distort the EU internal market, and increase costs by requiring manufacturers to make several versions of the same vehicle.

Meanwhile, the oil industry resists the idea that new vehicle technologies will need cleaner fuels. The proposals have also drawn fire from environmentalists, who say fuel and vehicle standards are too lax.

Both industries will now lobby the European parliament, where MEPs are able to demand changes to the new laws. But any hope of relaxing the regulations will be tempered by the knowledge that parliamentarians have tended to tighten, not ease, anti-pollution laws.

Lucy Plaskett is editor of the FT newsletter EC Energy Monthly.

begin a greater concentration on refining both petrol and diesel engine technology to whittle away progressively at emissions of each pollutant.

Much stress will be placed on the half-minute or so start-up phase of journeys, when the catalyst is too cold to work and when, as a result, most pollutants are pumped into city streets.

However, the new standards will also require reduced emissions levels throughout the car's operating cycle. Some of this can be achieved through improved catalytic converter design.

The main driver, though, is expected to be the pursuit of eliminating pollution at source - partly through achieving the most complete combustion possible, and partly by further reductions in fuel consumption which, by definition, means less fuel being burned.

Cutting exhaust emissions will prove expensive, reports John Griffiths

## Carmakers pay the price of progress

production rate of about 13m units, the industry argues, that works out at a cost of more than Ecu300 per car - to cut its emissions by only a further 3 to 5 per cent compared with the pre-catalyst era.

Vehicle makers have a clear self-interest in urging other measures that would rapidly improve air quality and would not cost the industry itself money - notably "cleaner" fuel and scrapping incentives to remove from the streets the millions of non-catalyst cars that produce most of Europe's exhaust pollution. None the less, the manufacturers' conviction that more stress should have been placed on this aspect of

control is deeply felt. Yet, provided the EU's Council of Ministers puts its final stamp of approval on the commission's proposals, the industry will grumble loudly and carry on developing technologies that will allow compliance.

However, it will still attempt to have the rules rewritten to excise at least one proposal which it regards as an absurdity - for an on-board exhaust gases monitoring and display system showing on the dashboard that the car's exhaust gases are complying with the standards while in use. Such a system would be totally redundant because the function is implicit in the car's electronic engine and

catalytic converter management systems, the industry asserts.

There is at least a chance that such arguments might get listened to as the industry develops its various emissions-reducing technologies, for this year it has already won one important battle.

A few months ago the California Air Resources Board (Carb) rolled back a mandate which had required that 2 per cent of leading carmakers' sales in the state should be of zero-emissions - essentially battery-powered - vehicles from 1998, rising to 10 per cent by early next century. The technology is not adequately advanced, in terms of vehicle range, cost or performance

- and Carb accepted that the industry genuinely could not achieve the target.

Nor is the industry looking to any "breakthrough" technologies to get it off the legislative hook in Europe. It does not expect electric vehicles to form any significant part of Europe's car population until well into the next century, nor is the hydrogen fuel cell - recently demonstrated in a multipurpose vehicle by Mercedes-Benz - expected to make enough progress towards commercialisation to affect the commission's proposals for reducing petrol and diesel emissions.

Instead, the industry will now

## Saving for the earth

Hot air or sound business sense? That is one question investors might well ask when inquiring about a new type of bank account being offered to UK savers to help combat global warming.

The Earth Saver Account was launched last week by Dutch-based Triodos Bank, which aims to use proceeds raised "primarily to finance renewable energy projects and energy conservation projects in the UK".

In a new departure, Friends of the Earth, the UK environmentalist pressure group, is helping to market the scheme by urging savers to switch their savings into the account. Friends of the Earth has invested not only its prestige but also 2200,000 (\$306,000) in the new financial instrument.

Renewable energy and energy conservation are seen as important tools for keeping in check greenhouse gases, emitted by the burning of fossil fuels, which are believed to contribute to climate change. Governments meet in Geneva next month and Japan next year to agree targets for reducing such emissions in the next century.

Triodos is promising to pay Earth Saver Account holders gross interest rates of up to 5 per cent per annum. Glen Saunders, managing director of the bank's UK office in Bristol, says the rate of return on its existing loans to renewable energy projects averages about 8 per cent.

To green investors concerned about choosing a safe investment, Saunders says depositors would be protected by the Netherlands' scheme to protect savers in the event of the bank failing. Triodos is allowed to operate in the UK under European Union legislation enabling banks to set up shop anywhere in the EU.

Since the plan was unveiled last week, Triodos has had a number of inquiries and hopes public interest will increase even more after it publishes advertisements in two daily newspapers today.

Leyla Boulton

# HOW TO MAKE A MONEY BOX.

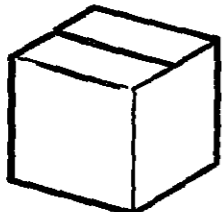


FIG 1.

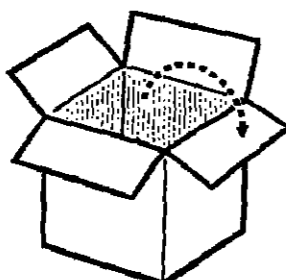


FIG 2.

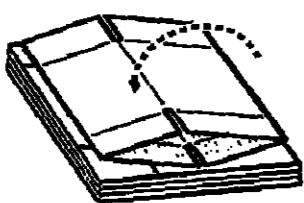


FIG 3.

Just put all your cardboard waste into a separate bin to save a packet on waste collection.

Paying less Landfill Tax in the process. And you'll help the environment too, because it gets recycled.

Start reducing your business's costs. Recycle the coupon today or call 0800 307 307.

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COMMENT & ANALYSIS

FINANCIAL TIMES

Number One Southwark Bridge, London SE1 9HL
Tel: +44 171-873 3000 Telex: 922186 Fax: +44 171-407 5700
Wednesday June 26 1996

Bonn in the China shop

Germany has trodden on one of China's most sensitive toes in its dispute over Tibet. There is no doubt that China has used unacceptable repression in Tibet, but, as with Taiwan, the government in Beijing regards its claim to sovereignty as an issue of paramount importance. It takes any challenge to that claim as unwarranted interference and a general attack on its own authority.

Mideast standoff

Last weekend's Arab summit in Cairo agreed that the only basis for an enduring settlement in the Middle East would be for Israel to return conquered Arab land in exchange for peace. That is the formula underwritten by the international community since the 1967 six-day war. It is also the means through which all the agreements between Israel and its Arab neighbours have been reached.

Amstrad's lessons

The news that Amstrad, the British electronics company, may be about to lose its independence is more significant than the company's £170m market capitalisation might suggest. Once, Mr Alan Sugar, Amstrad's ebullient chairman, seemed to be leading the way towards a new future for western companies threatened by competition from east Asia. Now Amstrad is in talks about being taken over by Psion, a company with more innovative products but a much more conventional business model.

Plug for the generation gap

Power generators fear the new EU agreement on energy liberalisation unduly favours the monopolies, say Neil Buckley and Simon Holberton

Last week's political headlines in Europe were dominated by the European Union summit in Florence and the agreement on a framework to lift the ban on British beef exports. But hours before the end of the beef war, EU energy ministers reached another agreement in Luxembourg that is likely to be more far-reaching in its implications and only a little less controversial.

After eight years of negotiations, they agreed to open the EU's \$175bn-a-year electricity market partially, but progressively, to competition. The deal will allow more large electricity users to shop around for the best prices inside the Union, and allow challenges to national monopolies such as that of Electricité de France (EDF), the state-owned French utility.

The deal's supporters, including the European Commission and business, say it will reduce EU industry's costs, improve international competitiveness and safeguard jobs. Its many detractors criticise it variously for going too far or for not going far enough.

On one side, Germany, lobbied hard by its businesses which shoulder some of the highest electricity costs in Europe, led a pro-liberalisation group including the UK, the Netherlands and Scandinavia. On the other, France, under pressure from the unions to protect EDF, led anti-liberalisers including Belgium and Greece.

Agreement was only finally secured when Chancellor Helmut Kohl, of Germany, agreed a compromise with President Jacques Chirac, of France, to which other EU states unanimously, if sometimes grudgingly, signed last Thursday.

The agreement will allow generators to build power stations in any EU country. And it will require national monopolies for the first time to separate their generation, transmission and distribution businesses, producing clear pictures of their costs and prices which will allow new competitors into their markets.

Smaller states such as Belgium, Greece and Ireland, which fear the impact of competition on their small domestic power industries, have been granted an extended deadline for implementing the law.

The most controversial aspect of the agreement is the right of member states to choose between two methods of market opening. One, the solution favoured by Germany and the UK, is negotiated third party access, where customers can buy electricity freely from domestic or foreign generators, paying a fee to the distribution network for carrying the electricity. The other is the single buyer system favoured by

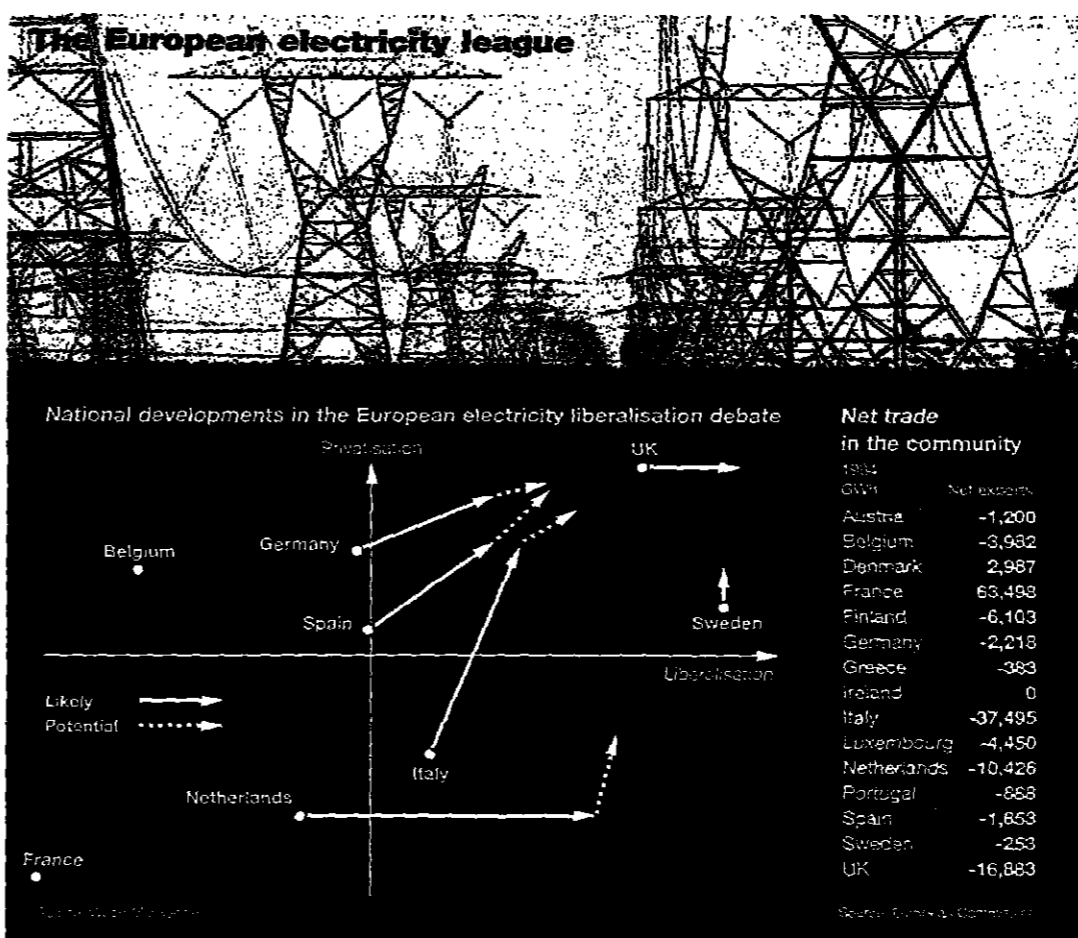


Table with 4 columns: Country, Small, Medium, Large. Lists electricity prices for various EU countries. Includes a 'Net trade in the community' table with values for countries like Austria, Belgium, Denmark, etc.

France: under this more restrictive option, a designated national electricity buyer retains control of the national grid, and enters into such contracts on behalf of its customers. German generators, which operate in the EU's biggest but most fragmented power market, are angry at what they see as significant concessions to France.

OBSERVER

Goldstream's a hot tip

Perhaps because it loosens tongues and clouds business wine as one of a public relations man's better friends - until the morning after - but the bottle has been turned a tidy profit, with no hint of a hangover, for one UK firm.

On the wall

Mirror Group Newspapers, it seems, has yet to verse itself in the semantic politics of Northern Ireland. When the company announced last week it was acquiring The Newsletter, the province's staunchly pro-unionist daily, the accompanying press releases referred to the paper's operations in the "six counties" of the north of Ireland.

Room quay

A travel tip for those on business in Ho Chi Minh City. It might be worth verifying, before you check into the Saigon Floating Hotel, that it won't be slipping its moorings at the dead of night and sailing off down the Saigon River.

Like lambs

Germany are becoming increasingly incensed at the "war" the British tabloids have declared ahead of tonight's Germany-England football match. Yesterday they began getting their own back.

Press the point

Robert Kuok, chairman of Hong Kong's South China Morning Post, knows a thing or two about doing business in China and the importance of Guozao - or connections. So the announcement that Sir Percy Cradock is to join the newspaper's board may mark more than an attempt to beef up its mainland expertise.

energy," warned Mr Jim Murray, director of the Bureau Européen des Unions de Consommateurs, the European consumers' organisation. Mr Alain Juppé, French prime minister, acknowledged this danger last week when he warned EDF it would need to "recast" its tariffs to meet competition from foreign producers, but making clear he expected any price cuts for industrial users to be matched by similar reductions for French households.

The European Commission says leaving the issue to the Court risked ending up with a chaotic, unregulated liberalisation. It insists the progressive electricity liberalisation will allow the market to take hold, as already happened in sectors such as telecommunications.

Mr Bob Turgoose, a utilities' industry consultant at Price Waterhouse in London, agrees - he believes the agreement is the most important development for the European power industry in 50 years. "Here we have something that affects everyone and has great potential for change," he claims.

100 years ago

The Venezuelan Difficulty Sir Julian Pauncefote, Her Majesty's representative in Washington, called yesterday on Mr. Olney, the Secretary of State, and requested him, as Great Britain is not represented in Venezuela either by a minister or a Consul, to obtain the views of the Venezuelan Government on the Harrison incident.

50 years ago

Makers of A Million Cars Advertisement: "Austin, makers of a million cars. The first Austin was built in 1906. With pride we can now announce completion of the millionth. And now for the second million, with production already higher than before the war and steadily increasing, Austin is making every effort to meet home and overseas demands. The Austin - you can depend on it."

**LEGAL DEFINITIONS**  
 Constructive dismissal v. 1 a mass firing of multiple employees (after *Massachusetts v. Ives*)  
 2 indirect dismissal, see *NOVA & MAW: asap* (PA 0171-243 4282)  
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 LAWYERS FOR BUSINESS

# FINANCIAL TIMES

Wednesday June 26 1996

Country retreat  
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Government targets quarter of 24,000 workforce

## Jobs go in shake-up at French naval shipyards

By David Buchan in Paris

The French government yesterday announced a big reorganisation of its DCN navy shipyards, putting them under pressure to become more efficient and cutting the 24,000 workforce by a quarter.

Mr Charles Millon, the defence minister, said a ministry inquiry had found that the Direction des Constructions Navales yards now had 4,840 more workers and engineers than they needed because of domestic military spending cuts and the level of export contracts.

Promising there would be no outright redundancies, Mr Millon said three-quarters of the "excess" labour would be shifted to other defence-related jobs while the remaining quarter would be put on short-time working.

A further 1,420 DCN jobs will disappear as workers retire over the next two years and are not replaced.

Mr Millon complained of declining productivity, rigid per-

sonnel practices and cumbersome purchasing policies at the nine DCN yards, which constitute the largest shipbuilding force left in western Europe.

He announced that as part of wider defence procurement reforms later in the year, the DCN would be split into two divisions, separating the role of buyer of naval systems from that of building them. "It is simple and logical that the function of buyer should be separated from that of seller," he said.

He also said the navy yards' export company, DCN International, would play a more active part in hunting for foreign navy ship orders, with the goal of increasing its world market share from just over 10 per cent to 20-30 per cent with FF3bn-5bn (\$580m-\$960m) worth of exports a year.

DCN International might be given more capital to enable it to seek alliances and joint ventures in other countries, he indicated.

But he pledged that the DCN would remain a government "arsenal", a status which makes outright redundancies near-im-

possible and alliances with other, mostly private, European yards difficult. But DCN unions protested at the "radical purge".

The announcement hit the yards at Cherbourg and Brest hardest, where more than 3,000 jobs will disappear, but left Toulon, the largest yard where 4,650 workers do mainly maintenance work, almost untouched. The unions forecast Toulon's turn would come as cutting back new ship construction would eventually hit maintenance work.

The task of absorbing DCN workers elsewhere will be difficult in view of next month's expected announcement that up to 82 regiments are to be disbanded and military bases closed. Giat, the near-bankrupt tank, arms and munitions maker, is shedding over 2,000 jobs around the country.

Giat this week confirmed its plan to join Royal Ordnance of the UK and Rheinmetall of Germany in a programme to make a new 140mm tank gun.

Jobs rate near record, Page 3

## World Bank alters lending to aid poorer countries

By Graham Bowley in London

The World Bank is to change the way it lends to poor countries, in a move which could substantially cut their borrowing costs.

The decision, announced yesterday, allows the countries a wider choice of currencies for loans, follows their intense lobbying of the World Bank on which they are heavily reliant.

The bank's \$145bn stock of outstanding multi-currency debt, covering 800 borrowers in the developing world and 3,000 individual loans, will be affected, as well as the Bank's \$12bn-\$14bn annual lending programme.

The move will allow poor countries to borrow in currencies which match more closely their borrowing needs.

It is the latest example of the bank's efforts under new president Mr James Wolfensohn to reform the bank and make it more sensitive to the needs of poorer countries.

At present most loans are made in the form of a multi-currency basket, comprising a mix of three major currencies: the US dollar, the Japanese yen and the German D-Mark.

Loans took this form since the bank faced restrictions in the currencies it could borrow on the international capital markets. It was also thought that some developing countries lacked the resources and expertise to manage individual currency risk.

But the policy meant many countries were denied access to the currency of their choice and in some cases it raised borrowing costs sharply.

Yesterday's announcement, which was agreed at a meeting of the World Bank's board, means that countries will be able to convert undispersed loans, of which there is \$44bn outstanding, into one of seven major currencies. These include the dollar, D-Mark, yen, Swiss franc, Dutch guilder, pound sterling and the French franc.

Countries with loans that have already been dispersed, which total \$101bn, will be able to convert them into one of four currencies: the dollar, the D-Mark, the Swiss franc and the yen.

The reform will also expand existing arrangements for single currency borrowing. Since 1991, countries have had access for up to half of their new annual borrowing to loans in any one, or a combination of, seven major currencies.

This limit will now be abolished so that countries can take up all new borrowing in a single currency.

The bank said these reforms were now possible since it was now able to borrow more widely and more easily on international capital markets. In addition, the bank's developed country shareholders, have extended its access to their markets.

## China and Germany attempt to calm dispute over Tibet

By Tony Walker in Beijing and Michael Lindemann in Bonn

Beijing and Bonn yesterday tried to stop their dispute over China's policy in Tibet, which has led to the cancellation of several German ministerial visits, damaging their long-term relations.

A Chinese foreign ministry spokesman said that, as long as the German government took "concrete and effective" measures to make amends, relations would not be allowed to deteriorate further. He did not specify the necessary measures.

In a sign of Chinese sensitivity over Tibet, the *China Daily* newspaper yesterday denounced the Dalai Lama, Tibet's exiled spiritual leader, as a puppet of international forces opposed to Beijing. It said he would never attain his goal of independence for the Himalayan region.

Beijing last week withdrew an invitation to Mr Klaus Kinkel, the German foreign minister, to visit China next month after the Bundestag, the lower house of

the German parliament, passed a resolution condemning human rights violations in Tibet.

Germany retaliated by cancelling planned visits to China by the ministers of construction and the environment. The government has also recommended that the Bundestag's legal committee call off a 10-day visit to China and Mongolia which was due to begin on Saturday.

The Chinese foreign ministry spokesman appeared to draw a distinction between the German government and the "few people" responsible for the invitation to the Dalai Lama, and the parliamentary resolution.

"I believe the majority of the German people support and endorse the development of friendship and co-operation between China and Germany," he said. "However, there have always been a few people within Germany who tend to interfere in China's internal affairs."

The Chinese spokesman spoke approvingly of a statement by Mr Helmut Kohl, the German chan-

cellor, who had sought to calm the argument by releasing his country's commitment to its relations with China.

The German government has said it will not back down in response to Chinese protests but is likely to ensure that Beijing is not given further provocation.

It has blocked an attempt by the opposition Social Democrats and the Greens to table a formal Bundestag debate on Sino-German relations this week.

However, Mr Christian Schwarz-Schilling, a member of Mr Kohl's Christian Democratic Union and a leading proponent of last week's motion on Tibet, warned that the Bundestag could well take further action because of Chinese behaviour in Tibet.

Bilateral trade of Dm27bn (\$17.6bn) makes Germany China's biggest European trading partner. At the end of 1995, Germany ranked ninth among investors, having invested \$1.2bn and pledged \$4.4bn.

Editorial Comment, Page 13

## Volvo stake

Continued from Page 1

year, most to be achieved by 1997. The Pharmacia & Upjohn deal is the biggest single step in Volvo's asset sale which began after it broke off a planned merger with France's Renault in late 1993 and decided to concentrate on its core automotive manufacturing.

## Yeltsin fires seven generals

Continued from Page 1

a leading Russian magazine that Mr Anatoly Chubais, the hero of the liberal establishment, would not return to government if he was elected for a second presidential term.

Mr Chubais, the architect of the country's bold mass privatisation programme and blamed by

millions of Russians for their economic difficulties, triumphantly announced the defeat of the hard-liners last week on behalf of Mr Yeltsin.

That is a move many democrats are ruing this week, because it has given the Communists fresh ammunition just at a time when Mr Yeltsin seemed unbeatable.

### THE LEX COLUMN

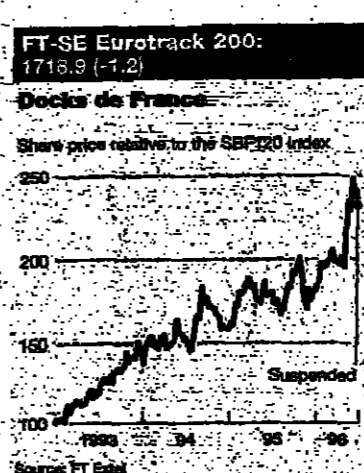
## Nouvelle finance

Auchan's FF16bn (\$3.1bn) hostile bid for Docks de France is the latest sign that the French may be adopting Anglo-Saxon business moves. Change is certainly afoot. But the bid is unlikely to unleash a slew of hostile attacks.

Auchan's move is the result of particular circumstances. The government's freeze on the construction of hypermarkets has placed French food retailers in a bind. Some, like Carrefour, are coping by stepping up overseas expansion. But for Auchan, which needs to gain critical mass in the domestic market, the timing of the freeze has proved awkward: hence the appeal of buying market share, despite the dangers of a hostile bid.

For most companies, though, the difficulties involved and the lack of visible targets remain a powerful deterrent. Even publicly quoted companies are often tightly held. This will change only when France develops a private pension system, furnishing a broad base of institutional investors to take the place of the country's web of cross shareholdings. Change is coming, but slowly: the government wants to foster a private pension system subtly, through tax breaks, without drawing the electorate's attention too overtly to the dire condition of the state's pay-as-you-go system.

This does not mean that French investment bankers will be sitting on their hands for the next 10 years. But they will be busy reshuffling assets and restructuring industrial sectors, as companies sell subsidiaries and buy out minorities. Hostile bids may become more frequent but they will still be few and far between.



tially more to a competitor like Swiss Re or Munich Re than as a stand-alone entity. Why, then, is Prudential opting for a partial flotation - on the face of it, the option most likely to secure M&G's continued independence and the least attractive price?

The answer, shareholders have to hope, is that the flotation plan is actually the opening shot in an auction process. This is a plausible explanation: if Prudential's real aim is a trade sale, having a flotation alternative up its sleeve does at least give it an extra card to play - important, when it has only a handful of credible potential bidders to play off against each other. But Prudential should be under no illusions: if the plan unveiled yesterday actually comes to fruition, it will have failed.

Prudential's plan to float a big chunk of Mercantile & General, its reinsurance arm, is how it plans to spend the money. Few shareholders will quibble with the plan on strategic grounds; there are negligible synergies between reinsurance and Prudential's main activities. But whether it makes sense to pull out of a business Prudential knows to help pay for one it does not - a building society - depends on what it is able to buy and at what price. Until then, the jury will remain out.

In the meantime, shareholders have to ponder a more immediate question: why Prudential is planning a flotation, not a trade sale. M&G is particularly strong in life reinsurance, where it has leading market positions and few heavyweight competitors; as a result, it is almost certainly worth substan-

Psion/Amstrad

In recent years, Mr Alan Sugar has seemed more interested in running Tottenham Hotspur, his football club, than Amstrad, his electronics business. Now he looks like being able to devote himself to football full time. At first sight, it may seem odd that a high-tech success like Psion, a world leader in hand-held computers, should want to buy such a tattered business. Amstrad's core consumer electronics business, which made it a stock market darling in the late 1980s, is now virtually worthless as vicious competition has squeezed margins.

The proposed deal makes sense only when it is realised that Psion has no interest in Amstrad's old core, which would probably be sold. Rather, it has its eyes on Danacell, a fast-growing but loss-making cellular phone manufacturer. Psion has a strategic need to incorporate communications technology within its hand-held computers. Without this, Psion will be handicapped in the emerging market for wireless devices that can make phone calls, surf the Internet and tap into office databases. Even with it, the company will face tough competition from the likes of Apple, Hewlett-Packard and Nokia.

At the indicated price of 200p a share, Psion will be paying \$334m (\$58m) for Amstrad. If all it was getting was Danacell, this would be excess cash. In fact, it will also receive net cash of around \$20m and Viglen, a personal computer business Amstrad bought two years ago, which is worth about \$102m. Subtract that and the implied \$54m for Danacell and the old Amstrad core does not look unreasonable, given the deal's strategic appeal.

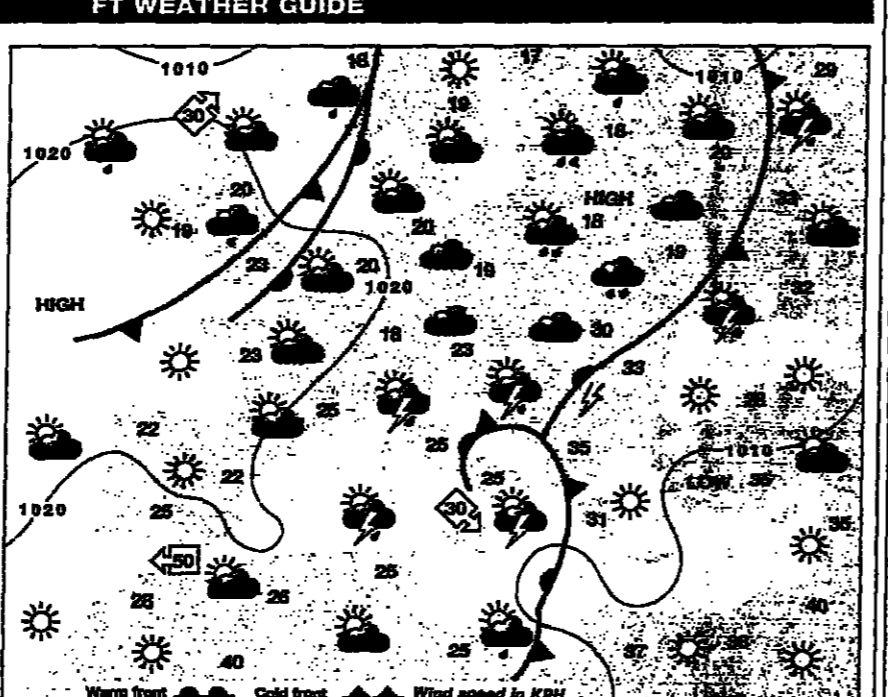
Nycomed

Yesterday's profits warning from Nycomed shows the Norwegian pharmaceutical group has been caught napping by its rivals. Nycomed's management spent much of the past year negotiating a merger with Ivaax of the US - which its own shareholders blocked - and subsequently demurring its Hafslund energy business. Meanwhile, some of its US competitors have been slashing prices and grabbing market share in its core area of X-ray imaging products.

As a result, Nycomed looks dangerously exposed. Following the demerger, imaging products make up 85 per cent of profits and competitors like Mallinckrodt and Bracco (half-owned by Germany's Merck) have been knocking 40-50 per cent off US list prices for them. Since deals are being increasingly struck with a few big buyers rather than individual hospi-

**Europe today**

Most of central Europe will be cloudy and cool with afternoon temperatures near or below 20C. The Benelux and France will have clearer skies, allowing temperatures to rise to between 17C and 24C. South-east England and southern Scandinavia will be dry and sunny with temperatures reaching 20C-24C. A band of cloud and patchy rain will move east, reaching Wales and northern England in the afternoon. Ireland will be sunny. South-east Spain and Portugal will continue sunny with maximum temperatures between 22C and 30C. Italy and the western Balkan states will have thunder showers. The eastern Balkan states will be hot and sunny.



**Five-day forecast**

On Thursday and Friday, most of the continent will turn warmer and sunnier. However, eastern Europe will become cooler with frequent thunder showers. Beginning Thursday, showers or outbreaks of rain will move into the UK. Most of the continent will turn unsettled and cooler again during the weekend. Spain and Portugal will remain dry and sunny with maximum temperatures reaching 28C-37C.

**TODAY'S TEMPERATURES**

Maximum	Minimum	City	Forecast
30	18	Paris	cloudy
28	17	London	cloudy
26	16	Berlin	cloudy
24	15	Madrid	cloudy
22	14	Rome	cloudy
20	13	Stockholm	cloudy
18	12	Helsinki	cloudy
16	11	Oslo	cloudy
14	10	Reykjavik	cloudy
12	9	London	cloudy
10	8	Edinburgh	cloudy

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12	9	London	cloudy
10	8	Edinburgh	cloudy

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Global leaders in and **repo**

Deutsche Morgan Grenfell

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# Financial Times Annual Report Service

 <p><b>AEROSPATIALE</b></p> <p>In 1995, Aerospace continued to improve its financial performance... <b>1995 Highlights:</b> Total turnover: FF 29.2 billion (US\$ 4.5 billion); Sales: FF 28.6 billion (US\$ 4.3 billion); Profit: FF 1.1 billion (US\$ 167 million).</p>	 <p><b>ALCATEL ALSTHOM</b></p> <p>Alcatel Alsthom is one of the world's leading providers of high technology systems... <b>1995 Highlights:</b> Total turnover: FF 160.4 billion (US\$ 24.2 billion); Profit: FF 1.1 billion (US\$ 167 million).</p>	 <p><b>ASSYSTEM</b></p> <p>ASSYSTEM specialises in providing consultancy services to industry... <b>1995 Highlights:</b> Total turnover: FF 1.4 billion (US\$ 210 million); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>COMPAGNIE BANCAIRE</b></p> <p>One of the leading European banking groups of companies... <b>1995 Highlights:</b> Total turnover: FF 20.3 billion (US\$ 3.1 billion); Profit: FF 1.1 billion (US\$ 167 million).</p>
 <p><b>CAISSE CENTRALE DES BANQUES POPULAIRES</b></p> <p>Caisses Centrales des Banques Populaires is the central banking... <b>1995 Highlights:</b> Total turnover: FF 1.1 billion (US\$ 167 million); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>CARBONE LORRAINE</b></p> <p>Carbone Lorraine designs, manufactures and distributes... <b>1995 Highlights:</b> Total turnover: FF 2.6 billion (US\$ 390 million); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>CASTORAMA</b></p> <p>CASTORAMA - A group at the heart of the DIY market... <b>1995 Highlights:</b> Total turnover: FF 16.4 billion (US\$ 2.4 billion); Profit: FF 1.6 billion (US\$ 240 million).</p>	 <p><b>CLUB MEDITERRANEE</b></p> <p>Club Méditerranée, the world's leading vacation village operator... <b>1995 Highlights:</b> Total turnover: FF 1.1 billion (US\$ 167 million); Profit: FF 0.2 billion (US\$ 30 million).</p>
 <p><b>COFINOGA GROUP</b></p> <p>COFINOGA, consumer credit specialist... <b>1995 Highlights:</b> Total turnover: FF 1.1 billion (US\$ 167 million); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>COLAS</b></p> <p>Leading Road Contractor... <b>1995 Highlights:</b> Total turnover: FF 7.3 billion (US\$ 1.1 billion); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>CREDIT LOCAL DE FRANCE</b></p> <p>Since its creation, the French leader in local development financing... <b>1995 Highlights:</b> Total turnover: FF 1.4 billion (US\$ 210 million); Profit: FF 0.2 billion (US\$ 30 million).</p>	 <p><b>CREDIT NATIONAL</b></p> <p>The Credit National Group serves as the principal French bank... <b>1995 Highlights:</b> Total turnover: FF 1.1 billion (US\$ 167 million); Profit: FF 0.2 billion (US\$ 30 million).</p>
 <p><b>THE DANONE GROUP</b></p> <p>The DANONE group ranks as the no.1 multiproduct food group... <b>1995 Highlights:</b> Total turnover: FF 79,450 MF; Profit: FF 2,133 MF.</p>	 <p><b>EIFPAGE</b></p> <p>EIFPAGE is one of the leading European construction groups... <b>1995 Highlights:</b> Total turnover: FF 46,000 MF; Profit: FF 550 MF.</p>	 <p><b>EMC GROUP</b></p> <p>EMC is an agro-chemical group... <b>1995 Highlights:</b> Total turnover: FF 16.8 billion (US\$ 2.5 billion); Profit: FF 1.6 billion (US\$ 240 million).</p>	 <p><b>ERIDANIA BEGHIN-SAY</b></p> <p>Eridania Béghin-Say is an agro-industrial group... <b>1995 Highlights:</b> Total turnover: FF 5.1 billion (US\$ 760 million); Profit: FF 0.2 billion (US\$ 30 million).</p>

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COMPANIES AND FINANCE: THE AMERICAS

São Paulo sells road concession for R\$1.85bn

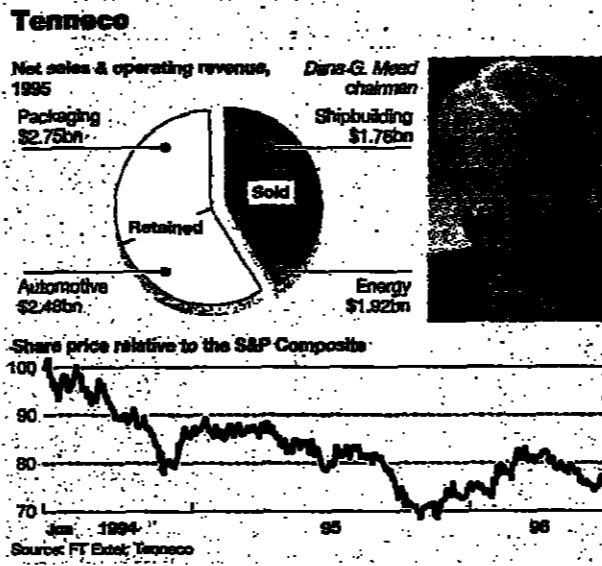
By Jonathan Wheatley in São Paulo

São Paulo, Brazil's most industrialised state, has begun an ambitious privatisation programme with the sale, for R\$1.85bn (US\$1.845bn), of a 20-year concession to operate 250km of highway.

concession period. Servix's income will be derived from tolls at current rates of approximately R\$0.04 per km for passenger vehicles.

Tenneco absorbs shock of change Laurie Morse on the creation of a leader in packaging and car parts

With his announcement last Wednesday that Tenneco would divest its energy and natural gas businesses through merging them with El Paso Energy, Mr Dana Mead, Tenneco's chairman, completed a five-year corporate transformation that few executives would have attempted.



but those are important. The deal will bring nearly \$4bn in value to Tenneco shareholders, in the form of equity in El Paso Energy and El Paso's assumption of nearly \$3bn of Tenneco's debt and other liabilities.

reported a \$750m loss for the year despite \$7bn asset sales. Relentless cost-cutting and an obsession with setting and meeting quality and performance goals, from the shop floor to the boardroom, allowed management to staunch heavy losses at the Case unit, and return it to profitability within two years.

Newport News Shipbuilding to shareholders is finished, Tenneco's debt will shrink to 30 per cent of capital. Tenneco management continues to face the challenge of replacing the revenues and income of its former units with higher-yielding businesses.

NEWS DIGEST

Warner Brothers in joint venture talks

Village Roadshow, the Australian cinema and entertainment group, said yesterday that it was "in active negotiations" to create a joint venture with the US-owned Warner Brothers operations in the UK and Germany.

TransAlta Energy in NZ plan

TransAlta Energy, the Calgary-based power utility, has bought the 51 per cent it did not already own of Capital Energy, the electricity distribution company serving Wellington, New Zealand.

3Com disappoints with 37% rise

Shares in 3Com, the fast-growing US computer networking company, dropped 9 per cent yesterday in response to a 37 per cent rise in fourth-quarter earnings.

Razzouk quits as AOL chief after four months

America Online, the leading US online service provider, announced yesterday that Mr William Razzouk had resigned as president and chief operating officer after only four months at the company.

Mr Steve Case, America Online's chairman and chief executive, will take over Mr Razzouk's responsibilities.

CapCities/ABC in international revamp

By Raymond Snoddy

Capital Cities/ABC, the US broadcaster, yesterday announced a restructuring of its international interests and their integration with Walt Disney Television International.

nels carried on cable and satellite. Mr Herbert Granath, who is based in New York, will be chairman of the new international business, which follows last year's merger of Disney and CapCities/ABC.

the international broadcast, cable and sales activities of CapCities/ABC with the international free and pay television, distribution, production and broadcast organisation of Walt Disney Television International.

the successful launch of Disney Channels around the world - most recently in Taiwan, the UK and Australia, with future launches planned in the Middle East and France.

Dominion Energy in Peru move

Dominion Energy of Richmond, Virginia yesterday moved into power generation in Peru by acquiring a controlling stake in the northern Peruvian electricity generating system, Egenor.


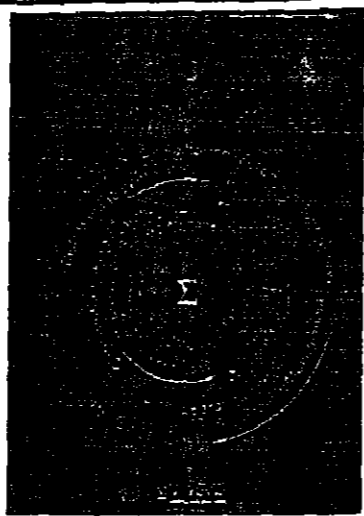



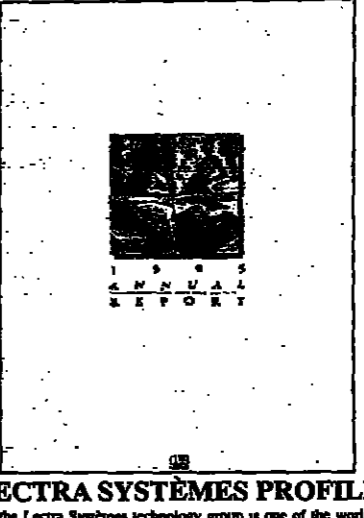
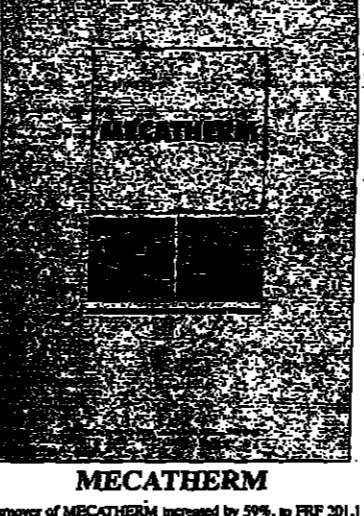
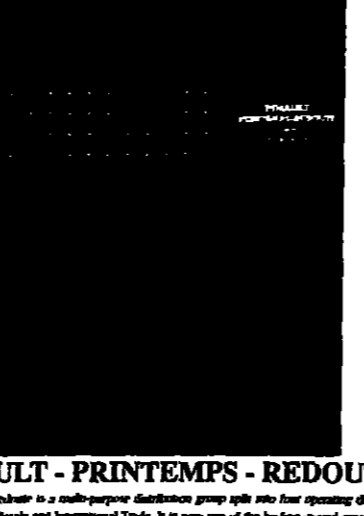
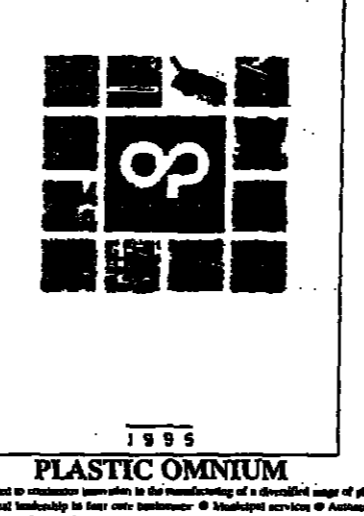

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# Financial Times Annual Report Service

 <p><b>ESSILOR</b></p> <p>The Essilor Group is the worldwide market leader in corrective lenses. Essilor also produces contact lenses, instruments for opticians and eyeglass frames. Backed by a powerful and efficient industrial and marketing organization that spans the globe, Essilor's products are available in all developed countries. The Group's primary objective is to offer everyone with a vision problem the most comfortable, personalized corrective lenses in the shortest possible time.</p> <p>1995 Consolidated Highlights (in FRF million): Sales: 6,538 (+4%)   Operating Income: 845 (+10%)   Net Income (Group share): 496 (+24%)</p>	 <p><b>EURISYS GROUP</b></p> <p>With its diversified capabilities serving industry in France and abroad, the Eurisy Group is a unique alliance of engineering and services. Organized into seven business areas, the Eurisy Group covers each stage in the plant life cycle. Its capabilities in consulting, engineering, industrial information systems, document management, monitoring and measurement, maintenance, testing and support in integrating complex systems enable it to offer services designed to optimize plant systems and return on investment. In 1995, the Eurisy Group had consolidated sales of FRF 4.74 billion, net income of FRF 204 million, and a workforce of 8,077.</p>	 <p><b>FRANCE TELECOM</b></p> <p>France Telecom is the world's fourth largest telecommunications carrier. Throughout 1995 services guided by a commitment to making our customers the best of our business. To satisfy your needs and expectations, we continued to expand our range of products and services, offering innovative services and expanding our market coverage. We also pursued a generalised reduction of costs, lowering rates by 10 percent for domestic calls, and between 17 and 23 percent for our monthly ISDN and leased line services. Our global alliance with Deutsche Telekom and Optel took on concrete form with the launch of Global One. The joint subsidiary now offers tailored global solutions to customers around the world.</p> <p>Key figures: Consolidated operating revenues: FRF 147.8 billion (+3.7%) Consolidated net financial debt: FRF 87.3 billion (+6.6%) Telephone lines: 3.4 million   Cellular phone subscriptions: 1 million.</p>	 <p><b>GTM - ENTREPOSE</b></p> <p>With a 1995 turnover of about 43 billion French Francs, a third of which was earned abroad, GTM - ENTREPOSE is a diversified construction and related services group involved in design work, construction, and management services for industry and local authorities. Apart from the building and public works sector which accounts for half its turnover, GTM-ENTREPOSE is a leader in engineering, consultancy, roadbuilding, industrial projects, electrical construction and offshore activities, and has developed a substantial business in transport infrastructure operations.</p> <p>Key figures: Turnover (1995 forecast): FRF 43 billion   Staff: 68,000 Chairman of the Board and Chief Executive Officer: Jean-Louis BRAULT</p>
 <p><b>HAVAS</b></p> <p>Havas was created in 1857 and is now the world's fifth media and communications group. Present in over fifty countries, Havas operates through five divisions: Advertising (Creative, CIE, News International), Communications consultancy (Havas Advertising), Information and Publishing (C.E.P. Communications/Group de la C&amp;I), Local media (Havas Media Communications) and Travel and Leisure (Havas Travel).</p> <p>1995 consolidated highlights (in FRF million): Revenues: 44,026 (+4.8%) Income from operations before taxes: 2,212 (+8.0%) Non-operating income before taxes: 10 (-1.9%) Net income, group share: 1,112 (-3.0%)</p>	 <p><b>IMS</b></p> <p>IMS is a European technical distribution Group, a federation of national companies, each on a human scale, specialized by market sector and based in the major European industrial centres. Both in Europe and beyond, the Group deals in special metallurgical products destined for the automotive, aeronautical and engineering markets. In France, the Group also distributes semi-finished plastic products. IMS is listed on the Paris Stock Exchange Second Marché.</p> <p>IMS: 35 Rue de Paris, 92532 Neuilly-sur-Seine cedex - France Tel: (33-1) 41 92 04 44, Fax: (33-1) 48 24 05 95 Internet: <a href="http://www.ims-group.com">http://www.ims-group.com</a></p>	 <p><b>LAFARGE</b></p> <p>Lafarge is one of the world's foremost producers of building materials. The Group holds leading positions in each of its core businesses: cement, concrete and aggregates, gypsum and specialty products. Active in over 40 countries and employing 35,000 people generating sales of FRF 33 billion, Lafarge is committed to the development of materials and advancement of the construction industry by bringing greater safety, comfort and aesthetic appeal to our everyday lives.</p> <p>LAFARGE: MATERIALS FOR BUILDING OUR WORLD</p>	 <p><b>LECTRA SYSTEMES PROFILE</b></p> <p>Set up in 1973, the Lectra Systèmes technology group is one of the world's two leading makers of Computer Aided Design and Manufacture (CAD/CAM) systems for the apparel, upholstery, footwear and luggage industries, as well as industries involved in processing industrial textiles, notably the automobile and aeronautical sectors. Lectra Systèmes employs 1,200 people world-wide. In 1995 its revenue totalled FRF 887 million, 84% of which was generated outside France. The group has about 5,500 customers, 25,000 installed systems and 60,000 trained users spread across 80 countries. Lectra Systèmes has planned a capital increase to some FRF 100 million for the end of June 1996, which will enable the group to meet its long term goal for growth and profits.</p>
 <p><b>LVMH Moët Hennessy Louis Vuitton</b></p> <p>LVMH Moët Hennessy Louis Vuitton brings together a unique collection of crafts and brands well known in prestige circles. In champagne, Moët &amp; Chandon, Veuve Clicquot Ponsardin and Penney, in cognac, Hennessy and Hinc. LVMH holds an important stake in Coty Inc. which in turn owns an important interest in Moët Hennessy, the company encompassing all LVMH's wine and spirit activities. In luggage and leather goods, Louis Vuitton, Loewe, and Bouché, in perfumes and beauty products, Parfums Christian Dior, Guerlain, Parfums Givenchy and Kenzo. In high fashion, Givenchy, Céline, Christian Lacroix, and Kenzo.</p> <p>THE WORLD'S LEADING LUXURY PRODUCTS GROUP</p>	 <p><b>LYONNAISE DES EAUX</b></p> <p>Lyonnaise des Eaux is a worldwide group employing 140,000 people. It operates in over 100 countries in 3 core activities:</p> <ul style="list-style-type: none"> <li>Services to the general community: water distribution and treatment, waste management, energy supply.</li> <li>Development and construction: building and civil engineering, road building and industrial contracting, consultancy activities (sewerage and car parks).</li> <li>Communicating, television and cable networks.</li> </ul> <p>Its turnover, 45% of which is generated outside France, totalled FRF 98.6 billion in 1995.</p>	 <p><b>MECATHERM</b></p> <p>In FY 1995, the turnover of MECATHERM increased by 59% to FRF 201.1 million (+23% in France, +43% for export). The net income increased by 66% to FRF 29 million. With 69% of its turnover realized abroad, MECATHERM continues its worldwide leadership for the design and manufacturing of industrial production lines for french breads.</p> <p>Quoted on the "Second Marché" of the Paris Stock Exchange since December, 1994 at FRF 180, the share gained 240% in 1995 and another 50% during the first 4 months of 1996. President, M. René VOGELIN, early in May, announced a FRF 300 million turnover for FY 1996, which means a growth of more than 50% for a net income of about FRF 40 million.</p>	 <p><b>NORBERT DENTRESSANGLE</b></p> <p>Norbert Dentressangle, a European group, is a road transport and logistics services specialist. Total 1995 payroll showed 4,600 employees, including 3,200 truck drivers. Norbert Dentressangle operates a fleet of 3,500 trucks and a warehousing area of 280,000 sqm. The Group is organized along 5 divisions: fleet, each serving a specific transport segment (general products, high-volume, controlled temperature, bulk cargoes, and logistics and courier distribution). With an international network of 71 offices (60 in France, 6 in the UK, 1 in Italy, 2 in Spain, 1 in the Benelux area and 1 in Portugal), Norbert Dentressangle Group must be considered as a major European leader.</p> <p>Consolidated key figures for the 1995 financial year: Turnover: 2,477.8 MF   Net result: 91.6 MF</p>
 <p><b>PERNOD RICARD</b></p> <p>Since its creation in 1975, PERNOD RICARD has set 3 objectives:</p> <ul style="list-style-type: none"> <li>To strengthen the Group's positions within the French spirits market</li> <li>To develop international activity in the spirits sector</li> <li>To diversify the related-line activities in France and abroad</li> </ul> <p>Today, the Group is the world leader in state-blended spirits, France's leading producer of fine drinks, cognac, gin, the main exporter of Anisette spirits and the world leader in that preparation. Pernod Ricard offers a complete range of international brands: BEAUVIS, FRAYSSE, SI, SIZZE, CLAY-CARRELL, JAMISON, ORANGINA, HAVANA CLUB, JACOB'S CREEK. Throughout 1995 and 1996, Pernod Ricard is actively pursuing an international expansion program.</p> <p>M. PIERRE RICARD President and Chief Executive</p>	 <p><b>PINAULT - PRINTEMPS - REDOUTE</b></p> <p>Pinault - Printemps - Redoute is a multi-segment distribution group with two main operating divisions - Retail, Fashion Services, Wholesale and International Trade. It is now one of the leading group companies in France and has been a member of the CAC 40 index since February 1995.</p> <p>The group's strength lies in its diversified structure, a source of resilience in the vicissitudes of economic cycles. The group has established a long-term strategy of reinforcing its market share in its leading positions. Its development policy is based on the promotion of established brands and international expansion. The group currently derives 27.7% of its turnover from foreign markets.</p> <p>1995 consolidated information: Sales: FRF 77,796 million   Operating Income: FRF 2,991 million   Assets: FRF 15.5 billion Chairman of the Management Board: Serge Weidberg</p>	 <p><b>PLASTIC OMNIUM</b></p> <p>Plastic Omnium is dedicated to customer innovation in the manufacturing of a diversified range of plastic products. It enjoys European and global leadership in four core businesses: <b>Motorcycle equipment</b> <b>Automotive equipment</b> <b>Performance plastic products</b> <b>Medical equipment</b></p> <p>Within Europe, France is leading and Europe's co-leading supplier of rubber valves and neighbourhood playgrounds, junction, valves and services. Automotive Equipment Europe is co-leading producer of counter components (damper and springs), interior components (dashboards, door panels and consoles) and their associated components (springs, fuel tanks, etc.). Performance Plastic Products: One of the world's largest manufacturers of thermoplastic products. Medical Equipment is leading supplier of specialised plastic products for the medical and pharmaceutical industries.</p> <p>1995 consolidated information: Plastic Omnium consolidated turnover: 4,600 million French Francs, of which 50% from consolidated business. 6,500 employees, all located in Europe, the United States and Asia. Chairman and Managing Director: Jean Bernès Director of the Plastic Division: Jean-Louis BOUTIER</p>	 <p><b>POLIET</b></p> <p>The POLIET Group holds a unique position in the building sector. Concentrating on the building materials area, it is both a large manufacturer and distributor. The Group is organized into six activities: <b>Building and Interior Improvement Product</b> <b>Wholesaling</b> <b>Industrial Joinery</b> <b>Construction Mortar</b> <b>Clay Roofing Tiles</b> <b>Locks and Hardware</b> <b>Concrete Products</b>.</p> <p>In 1995, POLIET Group's sales amounted to FRF 22.6 billion.</p> <p>POLIET Joint Stock Company with Management and Supervisory Boards President of the Management Board: Jean-Gérard CLAUDON</p>

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COMPANIES AND FINANCE: ASIA-PACIFIC/MIDDLE EAST

St George bid for Metway in the balance

By Nikki Tait in Sydney

Shares in Metway Bank, the Queensland-based regional bank, slid 9 cents to A\$4.51 yesterday, as analysts decided the chances of the Sydney-based St George Bank succeeding with its A\$810m (US\$640m) bid were diminishing.

George proposals, which would be implemented by a scheme of arrangement. The bidder needs 75 per cent approval from each class of share for the scheme to go ahead.

St George's chances of success have diminished in the past few days as the Queensland state government - which has promoted a rival scheme, involving a merger between Metway and two other financial institutions in the state to

create a regional financial services group - has bought up shares in Metway. Mr Rob Borbidge, the Queensland premier, confirmed yesterday that the government owned a 9.9 per cent interest in Metway.

A further complication is a 25 per cent stake in Metway preference shares held by National Australia Bank, the country's largest bank. NAB, which also has a small stake in St George and has been

Deutsche Telekom may list in Asia

By James Kyne in Singapore

Deutsche Telekom, the state-owned German group, yesterday said it was considering listing its shares on an Asian stock exchange.

Mr Ron Sommer, chairman of the management board, said after signing to buy 21 per cent of Malaysia's Technology Resources Industries that Deutsche Telekom was "thinking intensively" about a secondary listing in Asia. It has plans to launch one of the world's biggest IPOs in November in Germany and expects to raise DM15bn (\$9.75bn). Later, it also plans to list in New York.

Dickson Concepts acquires Seibu HK, Shenzhen stores

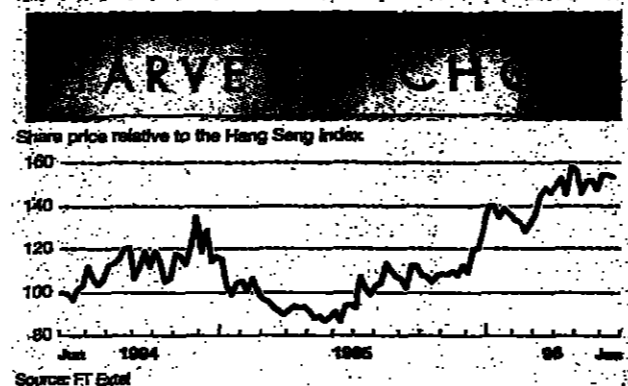
By Louise Lucas in Hong Kong

Dickson Concepts, the Hong Kong based luxury wholesaler and retailer, is to take control of the Seibu department stores in Hong Kong and Shenzhen, in southern China, for HK\$180m (US\$23.3m).

Dickson Concepts will acquire 85 per cent of Hong Kong Seibu Enterprise Company in return for an injection of HK\$180m. The company's operations include a wholly-owned department store in one of Hong Kong's prime shopping malls and a 55 per cent interest in a smaller Seibu store in Shenzhen.

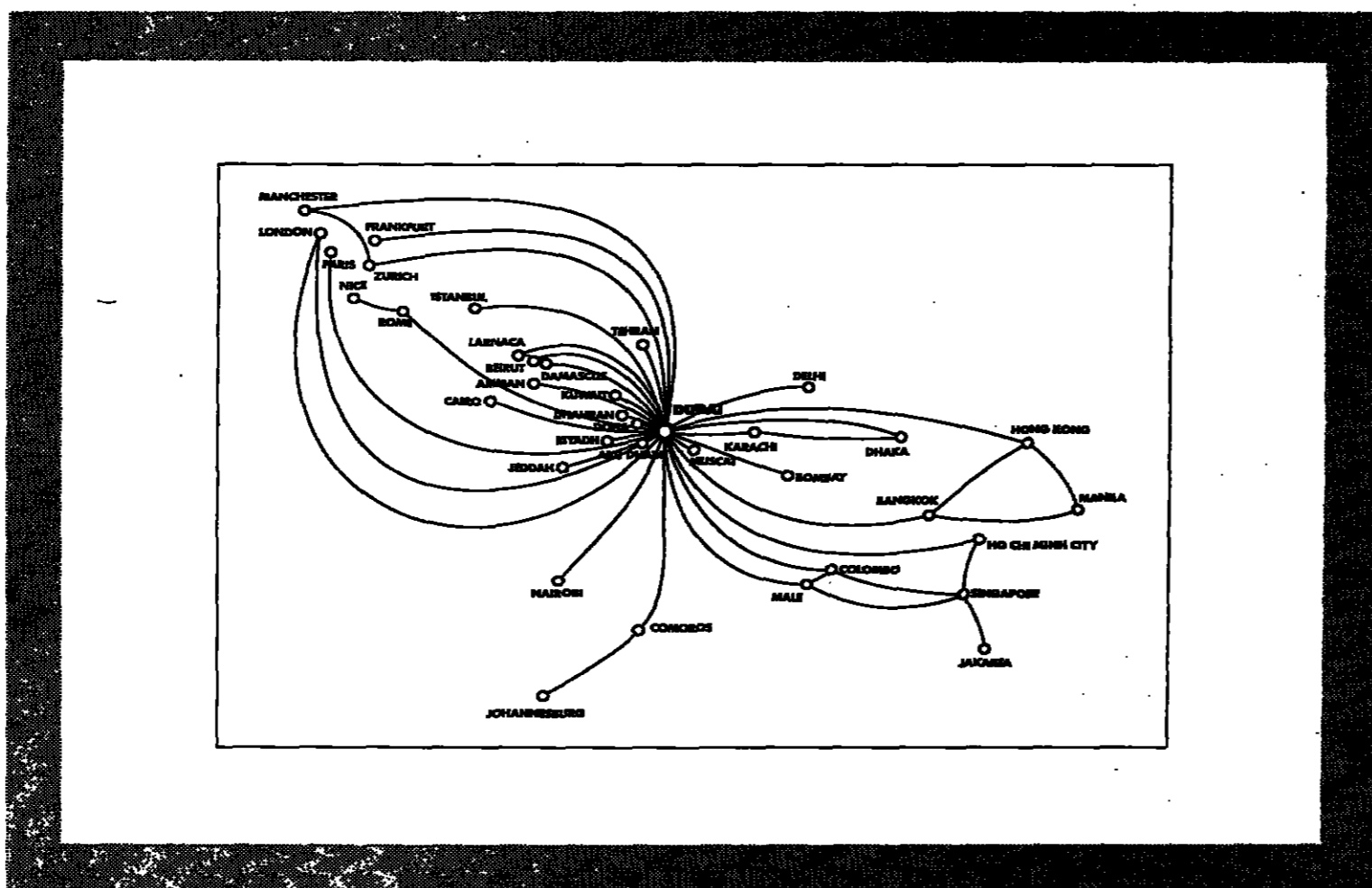
Seibu Department Stores, the Japanese company of which Hong Kong Seibu is a wholly owned subsidiary, is selling out after six years, just as the Hong Kong store is starting to break even. Turnover for the year to February 29 was about HK\$300m; at Shenzhen, turnover was more than HK\$135m and the business was profitable, according to Mr Poon.

Dickson Concepts



of about 10 per cent out of sales in the next financial year, which he said would mean a profit of HK\$68m after tax - or a return of 68 per cent on equity. Dickson Concepts' investment is split into a HK\$100m shareholding and HK\$80m shareholder's loan.

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NEWS DIGEST

Joint venture plans Israeli Visa card

Competition in Israel's fast-growing credit card market is set to increase following a deal announced yesterday by First International Bank of Israel, a member of the Safra group, and Atrac, an information technology company part-owned by SBC Communications, of the US. A joint venture between the two companies has won a licence to become Israel's second provider of Visa credit card services.

FIBI said that the new company, the first such operation owned by the Safra group, aimed to provide credit card services for the family of Safra banks worldwide. The new Visa company would have an initial financial investment of "dozens of millions of shekels", said the venture's managing director, Mr Yaacov Dior.

Sixty-seven per cent of the shares will be held by FIBI and 33 per cent by Atrac. The company will begin operations in 1997, trying to win over card-holders and businesses signed up with the existing Visa International franchise in Israel. ICC. "Real and very strong competition will enter the market. The whole nature of the credit card industry in Israel will be changed dramatically," FIBI said.

It added that it was "more than possible" that the new venture would produce Israel's first fully-fledged credit cards and provide direct credit to customers. ICC and Atrac, a local licensee of MasterCard International, issue what are essentially charge cards whose entire monthly balance is debited from a bank account. Mr Dior said the new FIBI-Atrac Visa consortium planned to share its profits with card-holders and merchants.

Atrac's ownership is equally divided between the Israeli Kaban group and SBC Communications. The group controls Arutzei Zahav, Israel's largest cable-TV provider; Dapei Zahav, a local equivalent of the Yellow Pages business telephone directory; and Amicos, Israel's largest software group. The credit card market in Israel has an annual turnover of \$10bn. According to a recent survey, 28 per cent of Israeli adults hold a Visa and another 25 per cent carry a MasterCard.

Yasmin Trefonson, Tel Aviv

Samsung lifts KorAm Bank stake

Samsung, South Korea's largest business group, said yesterday it had agreed to take over Bank of America's 10 per cent stake in KorAm Bank. After the transaction, Samsung will be the biggest Korean shareholder in the joint venture bank. Samsung's shareholding in the joint-venture bank will rise to 15.79 per cent after the deal. Before Samsung's takeover, Daewoo Group was the biggest Korean shareholder with 9.58 per cent. The Bank of America still maintains the single biggest stake - 19.3 per cent - in the bank. AP-DJ, Seoul

Boral power plant to go ahead

Boral, the Australian building materials and energy group, said it had reached final agreements that would allow the building of a A\$175m (US\$138m) co-generation power facility in South Australia to go ahead. The project is a joint venture between Boral and Canadian-based CU Power International, part of the Canadian Utilities/ATCO group of companies.

The 180MW co-generation plant will be largest such private sector project in Australia, drawing on natural gas from South Australia's Cooper Basin, where Boral has interests, and will provide a steam supply to Penrice Soda Products, for use in the production of soda ash. It will also generate an independent electricity supply for ETSA Corporation, the state government-owned electricity utility. Construction is due to start in October and the plant should be fully operational by July 1998.

Nikki Tait, Sydney

BRL Hardy buys NZ holding

BRL Hardy, Australia's second-largest wine producer, has bought a one-third stake in New Zealand's National Liquor Distributors for an undisclosed sum. A similar stake will be acquired by Nobile Vintners, the New Zealand-based wine group which is best-known for its "White Cloud" label and which already has a distribution arrangement with Hardy in Australia. Mr Stephen Miller, Hardy's managing director, said the stake would provide a "long-term, stable distribution arrangement".

HIH Winterthur in Argentine deal

HIH Winterthur, the listed Australian general insurer, said yesterday that it had set up a joint venture with Argentina's Interamericana group, to provide workers' compensation services in Argentina. The move followed the Argentine government's decision to make workers' compensation compulsory from next month. It said it expected the joint venture - HIH Interamericana AET - to generate about A\$80m (US\$16m) of premium income this year.

Nikki Tait

Thai mobile phone venture draws strong protests

By Ted Bardacke in Bangkok

Thailand's booming mobile telephone market, controlled by two companies, is set to have a third competitor - with strong links to one of the existing operators.

International Engineering (IEC), a distributor of telecommunications equipment controlled by media tycoon Mr Sondhi Limthongkul, and Total Access Communications, which already runs both analogue and digital mobile phone systems, have set up a company - Wireless Communications Service - to offer digital mobile phone services from June 1997.

Wireless Communications will operate its service on portions of the 1,800-megahertz bandwidth allocated to Total Access, which the latter does not use. The subcontracting out of this bandwidth to a friendly affiliate - IEC is already a service provider and marketer for Total Access, which holds a 6.3 per cent stake in IEC - is seen by analysts as a way for Total Access to thwart potential competition in the highly profitable mobile phone industry.

The move is being undertaken with the agreement of the state-owned Communications Authority of Thailand, which will receive between 25 per cent and 30 per cent of the revenue of the new company, including a minimum annual guarantee of \$144m. It will also receive a 1.1 per cent equity stake in the new company. IEC will hold 53.9 per cent of Wireless Communications and

Total Access will hold 45 per cent, although IEC will underwrite 70 per cent of the new company's start-up costs.

Advanced Information Services, Thailand's other mobile telephone operator, whose shares fell more than 4 per cent on Friday, and the Thai media have protested against the deal, charging that available bandwidth should be used to increase competition in the industry, not to set up affiliate companies.

Mr Suradet Mukyangkoon, IEC president, said: "Total Access is committed not to interfere in the new company's operations, so as to create free competition."

Nevertheless, Total Access and Wireless Communications have agreed to form a roaming arrangement, which will allow subscribers to connect between the two networks.

Total Access will also give the new company an initial group of subscribers, thus allowing Wireless Communications to generate revenue from its first day of operations.

Wireless Communications will pay Total Access \$150m for these two privileges, an amount Mr Suradet conceded "may not be worth enough for Total Access".

Yet keeping competitors out is vital, analysts said. "Total Access has often been criticised for having far too wide a bandwidth. The agreement with IEC is intended to reallocate some of its frequencies to an ally, before a future government takes them back and gives them to a real competitor," said Seazoo Securities.

Vertical text on the right edge of the page, including "INDEP calls" and "SHARE SENT".

COMPANY NEWS: UK

# Pru to float M&G with £1.5bn tag

By Motoho Rich and Ralph Adams

Prudential, the UK's largest life assurance group, has joined the accelerating process of consolidation in the UK financial services industry, announcing it is to float its Mercantile & General reinsurance subsidiary and expand its presence in life insurance and retail banking.

The group aims to float M&G by a global equity offering in the autumn.

Analysts said the flotation valuation, which some have estimated at up to £1.5bn (£2.29bn) would be difficult to fix because this would be the first reinsurance company to list in London.

For this reason, the group is expected to sell only about half of the shares.

"We have decided to concentrate on the retail financial services sector and related fund management and not be in the wholesale end of the business," said Mr Peter Davis, chief executive.

The flotation would mark the group's first strategic move since Mr Davis became chief executive in May 1995. Mr Davis and his board decided M&G was a non-core subsidiary offering few synergies with its life insurance and fund management businesses.

Pru shares rose 4p to 409p on the news. Analysts said the decision to spin off the reinsurance subsidiary made sense.

"M&G has been recognised as non-core for several years," said Mr David Nisbet, analyst at NatWest Securities.

The flotation, expected in the autumn, opens the way for the group to make acquisitions in the UK and expand overseas. The Pru's move follows other developments in the UK insurance industry, including the merger between Sun Alliance and Royal Insurance, the flotation of Sun Life & Provincial,

part of French insurer UAP and the acquisition of Clerical Medical, the life insurer, by Halifax Building Society. The Pru has made no secret of its desire to buy another life insurance company and a building society in the UK.

Mr Davis said he foresaw further consolidation and polarisation in the UK market, with a handful of large groups dominating the industry in the next century.

Over the past few months the Pru's name has been linked with a number of potential targets in retail finance, including the Woolwich and Alliance & Leicester building societies and Friends Provident, the mutual life insurer.

The Pru also plans to expand into mortgage lending and deposit taking in a bid to retain some of the funds released when its life policies mature.

Although the funds raised through the flotation of M&G will provide the Pru with financial ammunition for its expansion plans, analysts did not rule out the possibility of a future rights issue.

"They have scope to raise about £500m of debt and if they get about £800m from the M&G deal they could also gear up some amount of debt on the back of that," said Mr Nisbet.

"But the balance will have to come out of new equity so it seems to me a rights issue could still be on the cards."

M&G is likely to seek listings in New York and other markets as well as in London.

M&G was hit badly in the early 1990s by a series of catastrophes and industrial disease claims. The general reinsurance activities reported a £95m operating loss in 1993 but, after the appointment of a new management team, made a £83m profit last year. Prudential has failed to secure a trade sale, despite approaches from possible bidders in recent years.

# Vocalis to float at £30.5m

By Jane Martinson

Vocalis Group of Cambridge, which integrates speech recognition technology into telecommunications systems, is to place 5.3m shares at 95p, a price which gives further evidence of the market's appetite for new technology issues.

The placing values the company at £30.5m (£46.86m), 55m more than predicted last week. Albert E Sharp, brokers, said the flotation had been substantially oversubscribed.

Most of the £4.4m net raised from the placing of just under 20 per cent of the shares is to be spent on product development and marketing.

Mr Jeremy Peckham, managing director, said the workforce would rise from 80 to 80, with most being taken on in sales and marketing. An office is also being set up in California at the end of this year. "We feel that the time has come to put the proven products out into the market place," he said.

Typical are an automated receptionist and a voice-activated mobile telephone.

Last month, the company signed a deal worth £500,000 with Ericsson, the Swedish telecommunications group, to supply Telekom Malaysia with equipment. Mr Peckham said the company was in discussions on further deals. Vocalis was formed three



Jeremy Peckham: "Time to put proven products into the market"

years ago in a management buy-out from Logica, the computing services group. The 13 buy-out members retain a 26 per cent stake.

Heavy investment in the year to March 31 led to a

£1.21m loss on sales of £535,000. In the first two months of the current year the company achieved sales of £233,000. Mr Peckham expects similar levels of investment to affect profits this year.

# Wickes shares suspended

By Andrew Taylor and William Lewis

The chairman of Wickes, the troubled DIY retailer, came under a storm of criticism from institutional investors yesterday after the group revealed that serious accounting problems probably resulted in 1995 profits and shareholders funds being overstated.

The group's shares were suspended yesterday morning after plunging by 40p to 69p.

Wickes said it was not possible to quantify the "magnitude of these overstatements" and would only say that its problems related "to the timing of recognition of profit from supplier contributions."

These are understood to involve cash discounts, known as over-riders, paid by suppliers to large DIY stores and builders merchants in return for big volume orders.

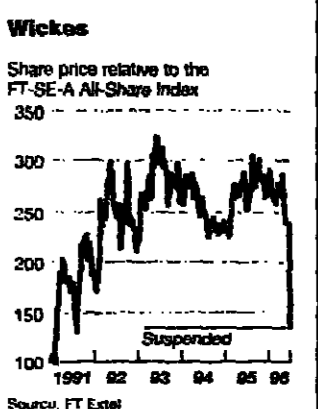
It is thought that some of the benefits of over-riders may have been included by Wickes in its annual profits before items had been sold. The company warned that earlier years profits may also have been overstated.

A board meeting was still continuing at Wickes last night.

## LEX COMMENT

# Wickes

Is Wickes, the Do-It-Yourself retailer, being held together by a couple of nails and a bit of sticky tape? Yesterday's 37 per cent drop in the share price before it was suspended suggests the market thinks so. "Serious accounting problems" are enough to churn the most seasoned investor's stomach. Like many businesses, Wickes has been in the habit of squeezing discounts out of its suppliers in return for promising to sell a certain volume of their products.



Like most retailers, it was paid some of these discounts upfront in cash, to help defray extra marketing costs. The problem in this case, it appears, is that Wickes booked these discounts as profits, only to find later that it failed to sell the promised volume of goods and therefore was not entitled to that profit.

As the DIY market's pile-'em-high, sell-'em-cheap operator, Wickes has won plaudits from the City for grabbing market share by opening new stores and undercutting rivals. If it now turns out that this rapid expansion was based partly on false profits, it raises questions over the whole strategy.

It also raises serious corporate governance issues. Wickes is run by Mr Henry Sweetbaum, who has combined the roles of chairman and chief executive since he rescued the business from near-bankruptcy in 1982. Last year the board paid itself £3.8m - more than a tenth of underlying profits. Mr Sweetbaum received £1.2m including a £750,000 bonus based on share price performance which, it now emerges, was built on inflated profits. At the very least, Mr Sweetbaum should split his roles and repay his bonus.

# Independent News calls for I£106m

By John Murray Brown in Dublin

Independent Newspapers, the Dublin-based media group controlled by Mr Tony O'Reilly, is raising I£106m (£66.7m) in a rights issue to strengthen its balance sheet.

The 1 for 3 issue, priced at 45p, is the first time the group has resorted to new equity since 1983. Its shares closed in Dublin at 500p, down 15p.

Mr O'Reilly refused to be drawn on the precise reasons for the issue, but did not rule out further acquisitions. "This is the right time for us to come back to the market," he told the annual meeting in Dublin.

Independent has an opportunity to increase its stake in the Australian Provincial Newspapers, following a change in federal laws restricting foreign share ownership. There is also an option to increase the holding in Wilson & Horton the New Zealand publisher. Mr O'Reilly hinted that he would not be expanding the group's electronic media interests.

He is taking up his rights on 8.5m shares, representing about 21 per cent of the company, at a cost of I£22.9m. The balance is being underwritten

by Bankers Trust International, and Davy, the Dublin stockbrokers.

The issue will reduce the company's gearing to 14 per cent. Before the announcement it was projected at 56 per cent by the year end, or 110 per cent if the value attributed to the titles is stripped out.

Asked about losses at The Independent newspaper, published by Newspaper Publishing, in which the Irish company has a stake, Mr O'Reilly said it was "one price increase and one newsprint price decrease away from profitability".

Brokers broadly welcomed the rights announcement. Although priced at about 12 per cent discount to the market, analysts say it is not a giveaway. Indeed it would seem to take full advantage of recent gains in the share price. Mr O'Reilly's pledge to take up his rights in full will also underpin any wavering shareholders.

The proceeds will help the company reduce debt, after some cashflow constraints brought on by the pace of acquisitions. Mr O'Reilly was being unusually tongue-tied about acquisitions plans.

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CURRENCIES AND MONEY

MARKETS REPORT

Lira prepares for assault on key L1,000 level

By Philip Sewell

An otherwise unremarkable day on the foreign exchanges was enlivened by the spectacle of whether or not the lira would be able to make a sustained breach of L1,000 for the first time since August 1994.

The lira did reach its peak below L1,000 to briefly dip below L999.95, but closed the day in London at L1,002 from L1,006. The market has responded positively to the widespread expectation of a cut in interest rates, perhaps by as much as 50 basis points.

The lira's strength spread to other high-yielding currencies, with the Swedish krona and sterling also gaining ground. The krona closed at SKr4.329, the strongest level since January 1993.

The dollar had a steady day, finishing barely changed at DM1.6322 and ¥109.05. The sterling trade weighted index closed at 86 from 85.8.

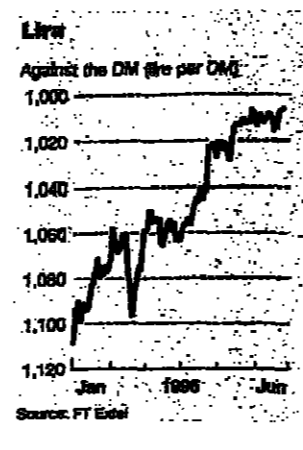
mental shift in one of the leading currencies. He also noted that the G-7 had produced fewer communiqués, but when we chose to send a formal co-ordinated signal - as we did in April 1995 when we called for "orderly reversal" of exchange rate movements - we made sure it meant something.

The current one month implied volatility for dollar/yen is 7.6 per cent, and 7.1 per cent for dollar/D-Mark. This compares with historical figures of 10.7 per cent and 12 per cent respectively.

The Bundesbank's trade weighted index of the D-Mark's value was 197.6 at the end of May, down 3.2 per cent from the end of 1995, but 0.1 per cent above the end of 1994.

Mr Jim O'Neill, chief currency economist at Goldman Sachs, said the decline in volatility reflected the better global conditions of the world economy, particularly in terms of trade and inflation.

Mr Brian Martin, currency strategist at Barclays in London, said the strength in the high-yielders suggested "investors remain very content to run with the carry-trades at the moment."



Lira rate against the DM (per DM)

Source: FT Total

cloud of uncertainty and crisis has receded."

This year the dollar/yen has traded in a range just over six years, with dollar/D-Mark in a 13 pennig range. Analysts at Goldman Sachs in New York said that if this continued, it would be the narrowest since the late 1970's.

Mr Summers said the G-7 process had been successful in producing greater stability among the main currencies.

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POUND SPOT FORWARD AGAINST THE POUND

Table with columns for currency, closing mid-point, change on day, bid/offer spread, etc. for various currencies like Euro, Swiss Franc, etc.

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Table with columns for currency, closing mid-point, change on day, bid/offer spread, etc. for various currencies like Euro, Swiss Franc, etc.

WORLD INTEREST RATES

Table showing money rates for various countries including Belgium, France, Germany, Italy, etc.

EURO CURRENCY INTEREST RATES

Table showing interest rates for Euro currency instruments like Belgium Franc, Danish Krone, etc.

THREE MONTH EURO CURRENCY FUTURES (LIFE) DM1m points of 100%

Table showing futures prices for three-month Euro currency instruments.

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CROSS RATES AND DERIVATIVES

Table showing exchange rates for various currencies like Belgium, Denmark, France, etc.

UK INTEREST RATES

Table showing London money rates for interbank sterling, Treasury bills, etc.

UK CLEARING BANK BASE LENDING RATE

Table showing clearing bank base lending rates for various terms.

BASE LENDING RATES

Table showing base lending rates for various banks like Adams & Company, Allied Trust Bank, etc.

EMS EUROPEAN CURRENCY UNIT RATES

Table showing EMS European currency unit rates for various currencies.

NON-ERM MEMBERS

Table showing non-ERM member rates for Greece, Italy, etc.

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Hyundai Engineering & Construction Co. Ltd. advertisement for floating rate notes due 1997.

Riddleton Limited advertisement for HKD 1,000,000 floating rate guaranteed bonds 2000.

Banque Générale du Luxembourg advertisement for subordinated floating rate notes due 1999.

Country Surveys Ltd advertisement for public speaking and training services.

S.G.W. Finance plc advertisement for guaranteed floating rate notes 1998.

First Pacific Capital Limited advertisement for guaranteed floating rate notes due 1999.

Standard Chartered advertisement for guaranteed floating rate notes due 1999.

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INV TRUSTS SPLIT CAPITAL - Cont.

Table listing investment trusts with columns for name, price, and change.

LEISURE & HOTELS - Cont.

Table listing leisure and hotel companies with columns for name, price, and change.

LIFE ASSURANCE

Table listing life assurance companies with columns for name, price, and change.

MEDIA

Table listing media companies with columns for name, price, and change.

OTHER FINANCIAL - Cont.

Table listing other financial companies with columns for name, price, and change.

PAPER, PACKAGING & PRINTING

Table listing paper, packaging, and printing companies with columns for name, price, and change.

PHARMACEUTICALS

Table listing pharmaceutical companies with columns for name, price, and change.

PROPERTY - Cont.

Table listing property companies with columns for name, price, and change.

RETAILERS, FOOD

Table listing food retailers with columns for name, price, and change.

RETAILERS, GENERAL

Table listing general retailers with columns for name, price, and change.

SUPPORT SERVICES - Cont.

Table listing support services companies with columns for name, price, and change.

TELECOMMUNICATIONS

Table listing telecommunications companies with columns for name, price, and change.

TEXTILES & APPAREL

Table listing textiles and apparel companies with columns for name, price, and change.

TOBACCO

Table listing tobacco companies with columns for name, price, and change.

AIM - Cont.

Table listing AIM companies with columns for name, price, and change.

AMERICANS

Table listing American companies with columns for name, price, and change.

CANADIANS

Table listing Canadian companies with columns for name, price, and change.

SOUTH AFRICANS

Table listing South African companies with columns for name, price, and change.

OTHER INVESTMENT TRUSTS

Table listing other investment trusts with columns for name, price, and change.

INVESTMENT COMPANIES

Table listing investment companies with columns for name, price, and change.

OIL EXPLORATION & PRODUCTION

Table listing oil exploration and production companies with columns for name, price, and change.

OIL, INTEGRATED

Table listing integrated oil companies with columns for name, price, and change.

LEISURE & HOTELS

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PROPERTY

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RETAILERS, GENERAL - Cont.

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SUPPORT SERVICES

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AIM

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From outer space to the factory floor Rockwell leads the way



RETAILERS, GENERAL - Cont.

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SUPPORT SERVICES

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AIM

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WATER

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TRANSPORT

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WATER

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AIM

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AIM

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GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by FT Index, a member of the Financial Times Group.

Company classifications are based on those used for the FT-SE Actuaries Share Index.

Closing mid-price are shown in pence unless otherwise stated. Highs and lows are based on intra-day mid-price over a rolling 15 second period.

Where data are discontinued in consecutive other trading, this is indicated by the term.

Symbolic referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend Covers are published on 10 days.

Market capitalisation shown is calculated separately for each line of stock.

Statistics used in calculations are based on IRII Yearbook Exchange/Trade.

Price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures.

Yields are based on mid-price, are given as percentages and are calculated to the credit of 20 pence and show for value of declared dividends and rights.

Estimated Net Asset Value (NAV) are shown for Investment Trusts. In the case of shares, along with the percentage discounts (D) of premium (P) to the current closing share price. The NAV books assumes price charges at par value, convertible converted and warrants exercised if applicable.

Indicates the most actively traded stock. This includes UK stocks.

Stocks are classified as follows: (S) UK stocks, (F) Foreign stocks, (I) International stocks, (A) American stocks, (C) Canadian stocks, (S.A) South African stocks.

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Table listing fund names, managers, and prices for Bermuda (SIB RECOGNISED) funds.

BERMUDA (REGULATED)\*\*

Table listing fund names, managers, and prices for Bermuda (REGULATED)\*\* funds.

GUERNSEY (SIB RECOGNISED)

Table listing fund names, managers, and prices for Guernsey (SIB RECOGNISED) funds.

IRELAND (SIB RECOGNISED)

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IRELAND (REGULATED)\*\*

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SARAZOLA FUNDS MANAGEMENT (GERMANY) LTD

Table listing fund names, managers, and prices for Sarazola Funds Management (Germany) Ltd funds.

GUERNSEY (REGULATED)\*\*

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IRELAND (SIB RECOGNISED)

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IRELAND (REGULATED)\*\*

Table listing fund names, managers, and prices for Ireland (REGULATED)\*\* funds.

LST ASSET MANAGEMENT LTD

Table listing fund names, managers, and prices for LST Asset Management Ltd funds.

ISLE OF MAN (REGULATED)\*\*

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ISLE OF MAN (SIB RECOGNISED)

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DRAGON KOREA FUND PLC

Table listing fund names, managers, and prices for Dragon Korea Fund Plc funds.

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MERIDIAN FUND MANAGERS INTL LTD

Table listing fund names, managers, and prices for Meridian Fund Managers Intl Ltd funds.

ISLE OF MAN (REGULATED)\*\*

Table listing fund names, managers, and prices for Isle of Man (REGULATED)\*\* funds.

JERSEY (SIB RECOGNISED)

Table listing fund names, managers, and prices for Jersey (SIB RECOGNISED) funds.

JERSEY (REGULATED)\*\*

Table listing fund names, managers, and prices for Jersey (REGULATED)\*\* funds.

LYONS PRIVATE BANKING (SI) LTD

Table listing fund names, managers, and prices for Lyons Private Banking (SI) Ltd funds.

LUXEMBOURG (SIB RECOGNISED)

Table listing fund names, managers, and prices for Luxembourg (SIB RECOGNISED) funds.

LUXEMBOURG (REGULATED)\*\*

Table listing fund names, managers, and prices for Luxembourg (REGULATED)\*\* funds.

FIDELITY FUNDS - CONT.

Table listing fund names, managers, and prices for Fidelity Funds - Cont. funds.

LUXEMBOURG (SIB RECOGNISED)

Table listing fund names, managers, and prices for Luxembourg (SIB RECOGNISED) funds.

LUXEMBOURG (REGULATED)\*\*

Table listing fund names, managers, and prices for Luxembourg (REGULATED)\*\* funds.

SCANDINAVIAN INTERNATIONAL SECURITIES FUND

Table listing fund names, managers, and prices for Scandinavian International Securities Fund funds.

LUXEMBOURG (SIB RECOGNISED)

Table listing fund names, managers, and prices for Luxembourg (SIB RECOGNISED) funds.

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Table of fund prices and performance metrics, including columns for fund names, unit prices, and percentage changes.

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OTHER OFFSHORE FUNDS

OFFSHORE INSURANCES

MANAGED FUNDS NOTES
Fund prices are shown after charges and before
... (detailed notes regarding fund pricing and performance)

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LONDON STOCK EXCHANGE

MARKET REPORT

Faltering futures market drags down equities

By Peter John

With nothing to play for but football and tennis, London's equity dealers and investors kept a low profile for most of yesterday.

highest level for well over a week and far higher than on Monday, when customer business was worth only £1.8bn.

On the other hand, the market torpor had its predictable side. The City tends to rate sport above most things, and Euro 96 football fever has smitten most dealers, while the opening matches at Wimbledon absorb the remainder.

contract on the Footsie was priced about 20 points below its estimated fair value premium.

The majority of institutional investors appeared to be concentrating on writing their first-half reports rather than using their liquidity to buy stocks.

Grid dips as stake sold

Late trade in National Grid Group caused a buzz in the dying minutes of the session.

The second theory pointed to Prudential selling its stake. However, analysts were sceptical that Prudential would offload shares reflecting a yield of more than 6.5 per cent.

Grid dips as stake sold

UK airports group BAA yesterday shook off its recent blues and moved strongly ahead.

The stock climbed 14 to 469p, making it the best performer in the premier FT-SE 100 listings.

There may be light at the end of the tunnel for shares in Grand Metropolitan, with several brokers tipping the stock.

Grid dips as stake sold

higher at 409p on relief that it is now less likely to launch a rights issue to fund future acquisitions.

HSBC James Capel estimates that M&G could be worth up to £1.5bn and, while the Pru is expected to keep control, a flotation - possibly in the US as the UK has no reinsurance sector - would certainly help the company's plan to buy a building society.

Analysts rapidly rang around other DIY retailers to investigate whether the same problem may have affected them. In spite of reassurances, there was still some concern.

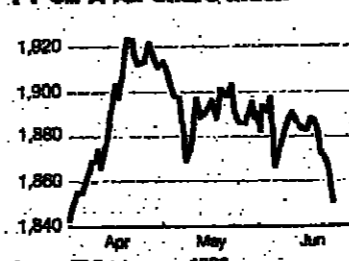
Grid dips as stake sold

Attention was once again fixed on BT, and in spite of reassurances from the group's finance director in briefing on Monday, doubts about the dividend remained.

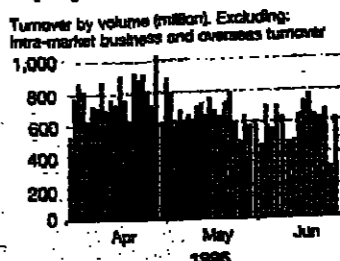
Suspension of shares in Wickes, the DIY chain, dominated the retail sector. The stock plunged 40 to 69p in initial dealings.

Analysts rapidly rang around other DIY retailers to investigate whether the same problem may have affected them. In spite of reassurances, there was still some concern.

FT-SE-A All-Share Index



Equity shares traded



Indices and ratios

Table with 3 columns: Index Name, Value, Change. Includes FT-SE 100, FT-SE Mid 250, FT-SE-A 350, FT-SE-A All-Share, FT-SE-A All-Share yield.

Indices and ratios

Table with 3 columns: Index Name, Value, Change. Includes FT Ordinary Index, FT-SE-A Non Fin p/a, FT-SE 100 Fut Jul, 10 yr Gilt yield, Long gvt/shorty yld ratio.

Best performing sectors

Table with 2 columns: Sector, Change. Lists Alcohol Beverages, Life Assurance, Engineering Vehicles, Transport, Food Producers.

Worst performing sectors

Table with 2 columns: Sector, Change. Lists Diversified Industrials, Insurance, Building Metals & Merchs, Retailers: General, Telecommunications.

FUTURES AND OPTIONS

Table with 4 columns: Index Name, Open, High, Low, Close. Includes FT-SE 100 INDEX FUTURES, FT-SE MID 250 INDEX FUTURES, FT-SE 100 INDEX OPTION.

Trading Volume

Table with 3 columns: Stock Name, Vol, Chng. Lists major stocks like BAA, BT, GrandMet, etc.

MARKET REPORTERS

Peter John, Joel Kibizzo, Lisa Wood.

LONDON RECENT ISSUES: EQUITIES

Table with 4 columns: Issue Name, Price, Change, Div. Lists recent equity issues like Bicompatibles W, Carfax, etc.

FT GOLD MINES INDEX

Table with 4 columns: Index Name, Value, Change, Div. Lists gold mining indices like Gold Mines Index, etc.

FT-SE Actuaries Share Indices

Table with 4 columns: Index Name, Value, Change, Div. Lists various actuaries share indices.

FT-SE Actuaries All-Share

Table with 4 columns: Index Name, Value, Change, Div. Lists FT-SE Actuaries All-Share index.

Hourly movements

Table with 4 columns: Index Name, Open, High, Low. Shows hourly price movements for FT-SE 100, etc.

FT-SE Actuaries 350 Industry baskets

Table with 4 columns: Basket Name, Value, Change, Div. Lists industry baskets like Big & Creston, etc.

International financial news from a European perspective. AFX NEWS logo and text.

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Additional financial data and tables. Includes FT-SE Actuaries Share Indices, FT-SE Actuaries All-Share, Hourly movements, FT-SE Actuaries 350 Industry baskets, and various market reports.

WORLD STOCK MARKETS

EUROPE

Table listing stock prices for various European countries including Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, and Switzerland.

ASIA

Table listing stock prices for various Asian countries including Hong Kong, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand, and the Philippines.

PACIFIC

Table listing stock prices for various Pacific countries including Australia, New Zealand, and South Africa.

INDICES

Table showing major stock indices such as Dow Jones, Nikkei, and others, along with their current values and percentage changes.

US STOCKS

Table listing individual US stock prices and their changes.

Advertisement for Peregrine featuring an eagle and the text 'Asia - Buy, Sell or Hold? Speak to Peregrine, the leader in Asian equities, derivatives, country funds, fixed income securities and GDR's.'

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4 pm close June 25

NEW YORK STOCK EXCHANGE PRICES

Main table of stock prices with columns for stock symbols, prices, and changes. Includes sections for 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z'.

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Continued on next page



NYSE PRICES

NASDAQ NATIONAL MARKET

Table of NYSE stock prices including columns for stock name, price, and change. Includes sub-sections for 'Continued from previous page', '-V-', '-W-', '-T-', '-U-', and '-X-Y-Z-'.

Table of NASDAQ National Market stock prices including columns for stock name, price, and change. Includes sub-sections for '-R-', '-S-', '-M-', '-F-', '-G-', '-H-', '-I-', '-J-', '-K-', '-L-', '-M-', '-N-', '-O-', '-P-', '-Q-', '-R-', '-S-', '-T-', '-U-', '-V-', '-W-', '-X-', '-Y-', '-Z-'.

AMEX PRICES

Table of AMEX stock prices including columns for stock name, price, and change.

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Table of AMEX stock prices including columns for stock name, price, and change.



# POWER GENERATION EQUIPMENT

## Intense competition squeezes margins

Companies which have already cut costs repeatedly are redoubling their efforts to find savings. But the manufacturers are under pressure to pass the benefits on to their customers, putting further pressure on prices. Stefan Wagstyl reports

There seems little end in sight to the long war of attrition in the power engineering industry. Even though demand for new plant has never been greater, intense competition among leading suppliers is depressing prices and squeezing profit margins. Despite some cuts in capacity, the industry is still paying the price for its over-expansion in the late 1980s and early 1990s.

As Mr Adolf Hüttl, president of KWL, the power business of Germany's Siemens, says: "The whole power engineering industry is hoping that the erosion of prices will slow. But it is only a hope."

Companies which have already cut costs repeatedly are redoubling their efforts to find savings. In the biggest step so far, Westinghouse of the US earlier this year closed its factory at Pensacola with the loss of 650 jobs and transferred production, mainly to a bigger plant at Charlotte.

North Carolina. But with rivals also making savings, the manufacturers are under pressure to pass the benefits on to their customers, putting further pressure on prices.

Orders are recovering this year after a slow-down last year caused by temporary delays in completing contracts in developing countries. However, in the absence of an unexpectedly dramatic increase, prices are unlikely to recover any of the 30 per cent fall seen over the past three years and could fall even further.

Mr Armin Meyer, director of the power generation division at ABB, the Swiss-Swedish group, says: "In volume terms, the world power generation market is still growing, but only by 2-4 per cent a year. In money terms, with the continuous cost reductions, I expect the market to be flat."

Mr Ron Pressman, vice-president of marketing at the power systems division of General

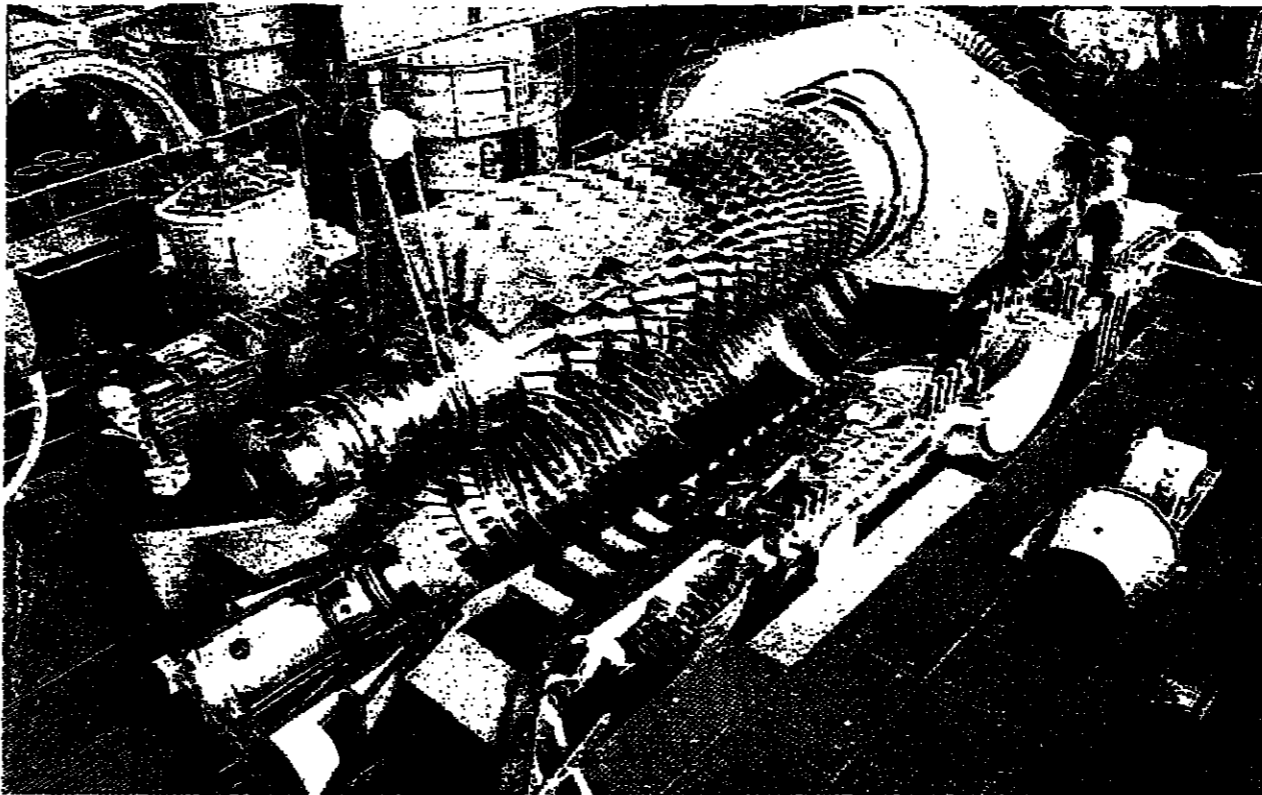
Electric of the US, takes a similar view.

Some utilities protest that the manufacturers' complaints ring hollow, given their reluctance to cut capacity. But the plant suppliers' financial performance in the 1990s has mostly been dismal.

Last year, Westinghouse, one of the top six which dominate the market, posted a \$207m loss in its power systems division, including write-offs. The other five integrated manufacturers - GE, ABB, Siemens, Anglo-French group GEC Alsthom, and Mitsubishi Heavy Industries - saw their margins squeezed. Only ABB increased its declared profits - and that by just 4 per cent.

The results are particularly frustrating for the manufacturers because in other respects they are performing well. Since the 1980s, they have adapted to the deregulation of the power industry in the US, the UK and elsewhere; they have developed sales in fast-growing markets in China and other emerging economies; they have cut factory costs by up to 50 per cent and launched new products at an ever-increasing pace. But they have little to show for their labours.

This is not what the industry expected when it geared up for



A Siemens gas turbine during assembly in Berlin. Siemens is one of the top six companies which dominate the power engineering market

expansion in the early 1980s in anticipation of growing orders, particularly from independent power companies in the developed world and in fast-growing Asian countries, especially China.

The forecast increase in orders has materialised far less quickly than most manufacturers predicted, particularly in

gas turbines. According to GE, in steam turbines, manufacturing capacity stayed unchanged at about 70,000MW a year, about 10-15 per cent ahead of production. But in gas turbines, capacity rose 70 per cent in 1990-94 to 36,000MW, about 20 per cent ahead of production by last year.

In developed countries, it is now painfully obvious to manufacturers that deregulation in the US, the UK and elsewhere has not produced any prolonged increase in orders. After a brief flurry of sales to independent power producers, the markets have been soured by the uncertainty caused by the persistent downward pressure on power prices which is squeezing generators' margins.

Plant manufacturers expect little recovery in demand in north America or western Europe before the year 2000. Even in eastern Germany, where unification produced a burst of new business mostly connected with cutting pollution from existing plants, virtually all the orders have already

Continued on Page 8

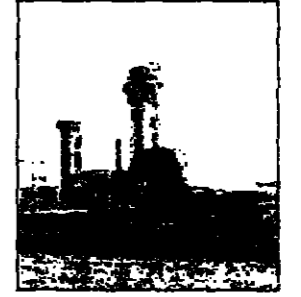
### INSIDE THIS SURVEY

International perspectives: Japan: Fierce competition has forced some changes  
India: Things are going to get worse  
China has set itself the most ambitious target of any Asian country  
Page 2

Eastern Europe: Energy demand is rising rapidly again  
Russia: Orders have started to pick up as the effects of reforms in the sector begin to take effect  
Page 3

Finance: The expansion of IPPs is attracting banks and securities companies into the market for financing schemes  
Page 3

Servicing: Better profits are to be made from servicing and renovating existing plants  
Page 4



Nuclear power: The focus for new plants is in the east. In the west, the issue is one of maintenance and extension of plant life  
Page 5

Nuclear fusion: Recent research results from fusion experiments are encouraging  
Page 5

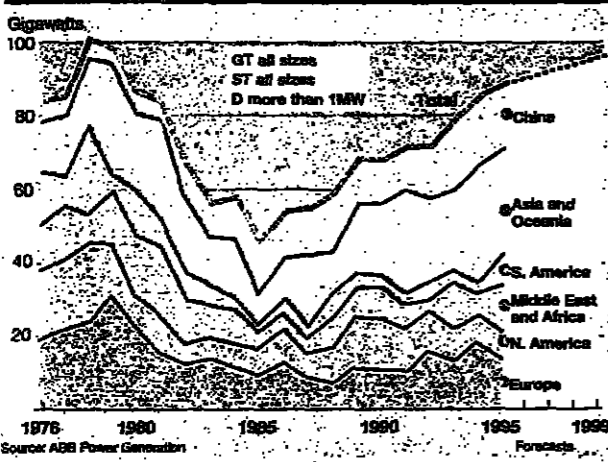
Aeroderivatives: The industrial rationale for using aero-engines for land-based power generation is strong  
Page 6

Market outlook: With flat market forecasts and excess capacity in the industry, producers must compete vigorously  
Page 6

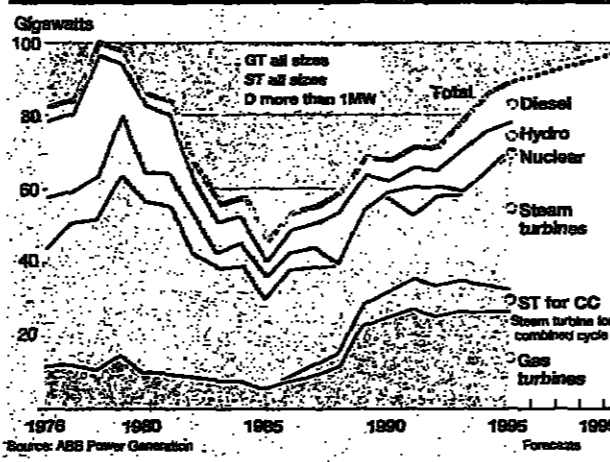
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Page 6  
Page 7  
Page 7

Production Editor: Philip Sanders

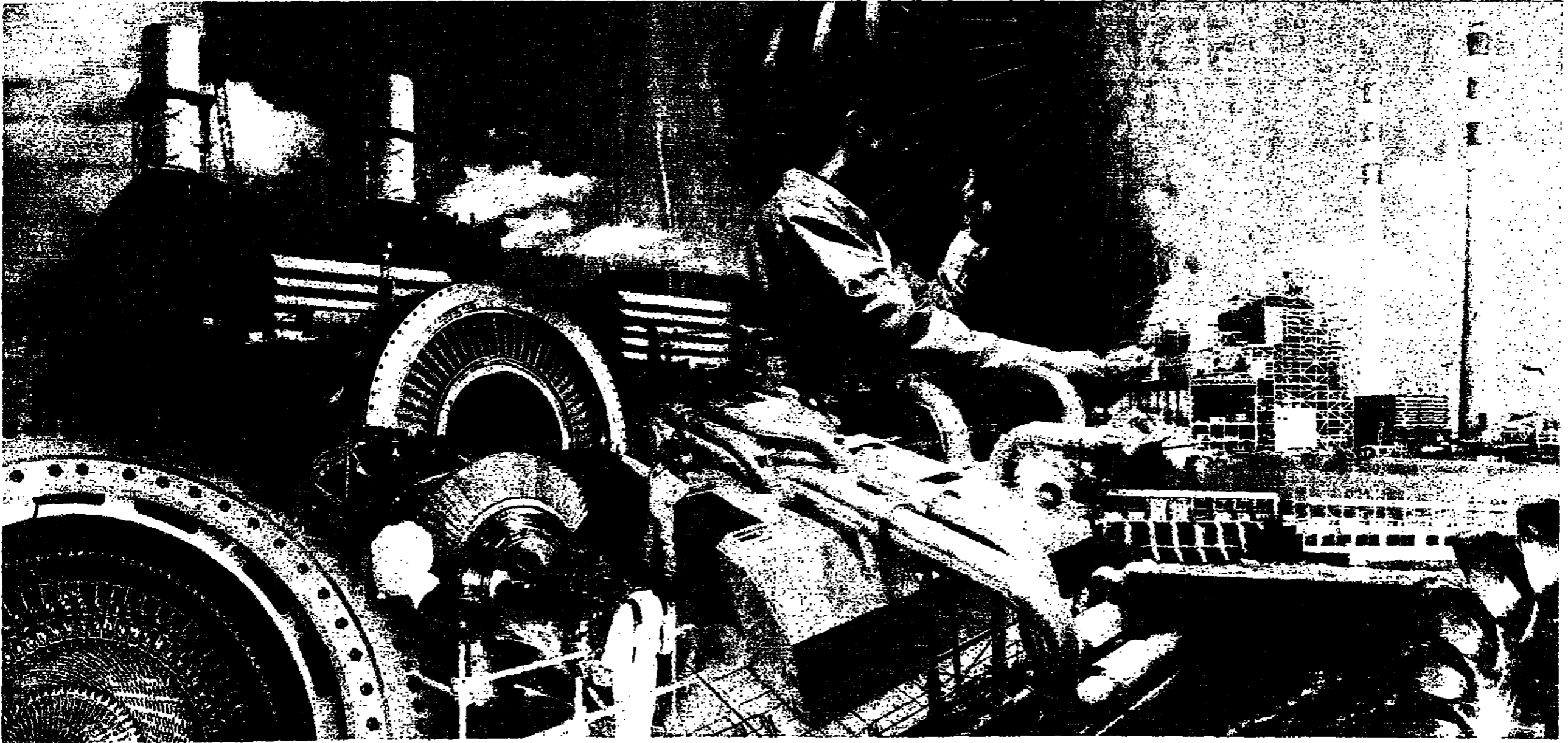
Regional market development



Technology market development



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■ Eastern Europe: by Anthony Robinson

## Demand is rising rapidly

The emphasis for the rest of this decade at least will be on retrofitting and upgrading existing plant and completing projects

Energy demand is rising rapidly again in eastern and central Europe as industrial production and real incomes recover from the cruel battering both received in the immediate aftermath of the collapse of the region's wasteful centrally-planned economies.

This is good news for the power generating industry, but even more so for those companies who specialise in revamping and modernising existing plant and/or in reducing the high levels of both waste and environmental pollution which characterised both power generation and heavy industry generally in the communist period.

Capital on the scale required to scrap and rebuild power stations and generating equipment in the region to modern standards is simply not available. There are so many competing demands for scarce investment resources and still so little in the way of domestic capital formation. So the emphasis for the rest of this decade at least will be on retrofitting and upgrading existing plant and completing projects, including several nuclear power generating schemes, which were started in the 1980s but moth-balled after 1989.

The most controversial of these completion projects is the Mochovce nuclear plant in Slovakia whose completion was blocked by lack of funds under the old regime and then by opposition from neighbouring Austria and a dispute with the European Bank for Reconstruction and Development.

The EBRD was only prepared to help finance completion if it was undertaken by western contractors to full EU safety standards. The Slovaks balked at the conditionality, and the cost, and opted instead for a cheaper version involving Czech constructors and Russian as well as western technical assistance.

The Czech republic took a

more conciliatory, and expensive line, by awarding the main contracts for completing the Temelin nuclear plant to Westinghouse of the US. But in both cases the arguments for completing the two Soviet-designed plants were couched in ecological as well as economic terms.

Completion of Mochovce will allow the closure of older, and more risky, Soviet plants in Slovakia. The energy output from Temelin will enable the Czech government to phase out the highly polluting lignite-fired power stations in northern Bohemia and elsewhere which have created an ecologi-



Completion of Mochovce will allow the closure of older, more risky, plants

cal wasteland and grave health hazards downwind of them.

Until now, nuclear and hydro power plants have been seen largely as alternatives to the conventional coal- or lignite-powered stations which still provide well over 90 per cent of Poland's energy production, for example, and well over 60 per cent of base energy output in most other states of the region. In the 21st century, however, it is likely that an increasing proportion of power generation in the region will come from highly efficient and environmentally friendly gas-fired combined cycle generating plants as in western Europe and elsewhere.

Some of the gas will be home produced. Both Poland and Ukraine, for example, are believed to have substantial indigenous natural gas resources and virtually unlimited potential for coal gasification. But much of the gas for future generating and other purposes will come from north-

ern Siberia and central Asia via two new high-capacity gas pipelines currently under construction.

The huge potential demand for new and upgraded power stations and generating equipment in east and central Europe, and the availability of cheap, skilled engineering workers, has also proved a magnet for the big multinational power generating equipment manufacturers.

The eastward march has been led by Asea Brown Boveri (ABB) which was the first to spot the potential and back its hunch with money and resources.

Such a combination is particularly interesting for countries such as Poland, which has turned its back completely on nuclear power and is struggling to support its large coal industry, and the Czech republic and Ukraine which are also large coal producers. Faced with the huge cost of fitting conventional wet flue gas desulphurisation (fgd) scrubbers, the Czech republic opted instead to retrofit Nalco-FuelTech's low-cost simultaneous "Sox, Nox and particulate reduction" system which, according to FuelTech, has a capital cost of only \$5-\$20 per kilowatt, compared to \$175-\$350/kW for conventional wet fgd technology, and much lower running costs.

But the biggest market for such technology is Poland where FuelTech estimates that about 780 boilers of all descriptions, from power and district heating plants to cement and metallurgy plants and waste incinerators, are suitable for retrofitting.

A pilot scheme at a heat and power plant at Legnica in south-west Poland is ready to come on stream in the autumn. It is being closely watched by the nearby Polska Miedz copper refinery and other high energy producers and generators seeking lower costs and higher efficiency without large-scale capital outlays.

In the meantime, however, the rise in energy prices - as well as most other prices - to world levels or thereabouts has had a sobering effect on energy consumers. Cost-conscious consumers are now demanding value for money while the higher cost of energy inputs has raised the attractiveness to power generators of relatively

cheap and effective retrofitting technologies, especially those capable of reducing waste and pollution and raising efficiency.

A prime example is Nalco-FuelTech, a joint venture between Nalco of the US, the world's biggest specialty anti-pollution chemical producer, and FuelTech, which is based in London but registered in the Dutch Antilles.

The company's combined technology system reduces sulphur dioxide, nitrogen oxide and dust emissions from power stations, boiler houses and other combustion plants by relatively simple and retrofitable technology which is easy and cheap to install and maintain. It works by injecting a cocktail of chemicals into flue gases. The process not only cuts emissions dramatically but also allows the power generator to use cheaper, lower-quality coal.

The Russian electricity sector is dominated by the joint stock company Unified Electrical Power System of Russia (RAO EES Rossi) and some 72 regional distribution companies (energos). Responsibility for the country's nuclear generation capacity is with Rosenergoatom.

The Russian generation system, consisting of 600 thermal plants, more than 100 hydro facilities and nine nuclear plants, has a total capacity of 212,000MW. RAO EES controls most thermal plants over 1,000MW and hydro plants over 300MW, representing 43,000MW or 18 per cent of generation capacity. Nine power plants are leased by the company to local energos which are important generators in their own right, owning about 135,000MW of capacity.

In the past few years, Russian electricity demand has decreased steadily, mainly due to reduced industrial activity with total supply declining from 1,077TWh in 1990 to 851TWh in 1994.

The rate at which demand

■ Russia: by John Leslie

## Reforms start to take effect

The rate at which demand recovers depends upon general economic reforms and further restructuring within the industry. Household tariffs remain lower than industrial tariffs, the opposite to the situation in most Organisation for Economic Co-operation and Development countries, and tariffs vary by region so that the relationship between costs and prices remains clouded.

In addition, "there is enormous potential for electricity savings in Russia," according to the International Energy Agency (IEA) mainly through efficient pricing policies, improving standards of electrical appliances, demand side management programmes and increased availability of energy efficient technology. According to the IEA, estimates of the annual demand reduction potential range up to 30TWh.

The uncertainty over demand levels makes planning capacity replacement even more complicated. However, irrespective of future demand levels, the age of much of the country's plants means that 40,000MW of existing capacity will have exceeded its design life by the year 2000. While capacity replacement throughout the 1980s was around 5,000MW a year, this slowed in the 1990s with only 700MW replaced in 1992 and 2,400MW in 1993.

Under the old system, the federal budget financed capital investment but with reforms the system now has the responsibility itself. Serious financial difficulties caused by non-payment, inflation and various flaws within the tariff system meant that investment financing dried up, leading to the establishment of investment funds by RAO EES and the energos in 1992.

According to the IEA, there are considerable disparities in profitability of the energos by region and by enterprise. These arise from differences in fuel costs, demand characteristics, the structure of the local market and inherited welfare obligations. There are also regional disparities in terms of capacity which allow some of the energos to generate healthy profits by selling excess generation to the grid to cover the shortfalls in other regions.

The investment funds of the

companies involved in the sector have now become the principal source of funds for new generation capacity and other requirements. Restructuring in the sector has enabled the companies themselves to assume more responsibility for investment decisions, and tariffs vary by region so that the relationship between costs and prices remains clouded.

Forty-nine per cent of the shares in energos are controlled by RAO EES. While the majority of shares in RAO EES are still held by the government, the privatisation process has enabled companies in the sector to raise money abroad and allowed foreign investors to obtain stakes.

The largest energo, AO Mosenergo, which supplies the Moscow region, is in a relatively sound financial state.

One area that is likely to figure highly is the expansion and refurbishment of cogeneration capacity. Some 69 per cent of Russian generation capacity is thermal, mainly fuelled by gas because of the country's abundant supplies, of which half is in the form of combined heat and power plants. Russia has the largest cogeneration capacity in the world and one of its largest markets is likely to remain that for modern, efficient gas turbines for enhancing these plants.

According to German electrical and electronics group Siemens, the application of modern, combined-cycle technology at existing heating-only plants offers an energy conservation potential of about 15-25 per cent compared to present levels of consumption - representing potential gas export earnings of DM65bn a year. Since 1992, RAO EES has ordered Siemens-built units for St Petersburg, Dzerzhinsk and Omsk which are being built by the LMZ-Siemens joint venture Interturbo.

However, the pace at which it and other generators in the Russian market can continue to do so will to a large extent depend upon the implementation of further reforms within the electricity market and the pace at which this happens remains a matter dependent on the outcome of other variables, including the presidential election.

what it describes as a sharp

increase in construction costs and an increase in non-payments. The company was therefore able to commit some Rb575bn to capital investment in the first quarter of the year, of which Rb531.2bn came from net profits. The success of such companies has allowed western companies such as ABB, Siemens and IVO to attain a gradual increase in orders from Russia after a slow start. Most of this work is carried out through joint ventures between the western companies and established Russian manufacturers of equipment.

ABB achieved sales of \$350m in Russia in 1994 and has established 19 joint ventures there. In March this year it announced it had won a \$100m contract from Omskenergo to help refurbish the company's HPP-3 plant in co-operation with Russian companies.

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Salomon was the sole manager for a \$2.5m private placement of American Depository Receipts last year, the first ADR offering for a Russian company which opened the company to US mutual funds and other regulated investors.

In terms of size, AO Mosenergo is only second to RAO EES with installed capacity of 14,478MW which generated 23.3TWh in the first quarter of this year. In the first quarter, the company sold 13.5TWh of electricity to local customers in the Moscow region and 4.5TWh to the national grid wholesale market. Sales in the first quarter totalled Rb3,614.5bn, generating net profits of Rb1,040.3bn.

This level of revenue allowed the company to maintain its rate of construction despite

Can you put up a power transmission system without annoying your neighbors?

Economic development and environmental conservation are often seen as natural enemies. But by taking environmental considerations seriously early on in a project, ABB keeps any impact to a minimum. For

example in southern Africa, ABB was asked to erect 410 kilometers of transmission lines without disturbing an indigenous colony of Cape vultures. The project was executed with minimum disturbance during the breeding season between April and September. It is somewhat surprising therefore that this neighborly respect did not slow down the project.

In fact planning ahead combined with local knowledge and advanced technology meant the Zimbabwean section of the Matimba Bulawayo interconnection was completed ahead of schedule.

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## 4 POWER GENERATION EQUIPMENT

Finance: by Stefan Wagstyl

**Considerable challenges**

Lenders have been willing to take the risks in return for an extra premium over the rates of interest earned on corporate loans

Just as independent power producers are building an ever-increasing share of new power stations, so financial companies are developing ever more sophisticated ways of funding their projects.

Traditional utilities, whether state-controlled or privately-owned, still account for the bulk of orders for new schemes. They usually raise funds from their own resources, or through bank loans secured by their balance sheets. In the case of government-owned utilities, these can be supported by government guarantees.

But Independent Power Producers (IPPs) are multiplying rapidly and now account for 30 per cent of the market for new power plants, compared with less than 5 per cent 10 years ago. They are spreading from the US and the UK, where they

first developed following deregulation, to other countries, notably developing nations in Asia, which need private finance to help fund fast-growing electricity needs.

The expansion of IPPs is attracting a strong band of banks and securities companies into the market for financing schemes, principally through project finance. The complexity of the financings - and the commercial and political risks attached to many schemes - mean the challenges involved in financing are considerable. But so, equally, are the potential rewards for the houses which construct effective packages.

The commercial banks active in the market include institutions in the US such as Chase Manhattan Bank and Citibank and in the UK, including National Westminster Bank and Barclays Bank. Investment banks in the field include Morgan Grenfell, a subsidiary of Germany's Deutsche Bank, and JP Morgan, Goldman Sachs and Morgan Stanley of the US.

Mr Jeremy Wilson, a vice-president at JP Morgan says: "The trend is for a huge increase in demand for project finance." Mr Bob Mabon, man-

aging director of structured finance at BZW, the investment banking arm of Barclays, says: "You are seeing a spread of project financing structures from the US and the UK to developing countries."

The main challenge in financing a power station project directly, instead of lending to the utility or company which owns the plant, lies in managing the risks involved.

Typically, a power development company organises a consortium to invest equity in the scheme, which may account for 25 per cent of the total cost. The consortium often includes the power equipment supplier, which contributes capital in return for plant orders. The remaining 75 per cent of the project is normally financed by banks.

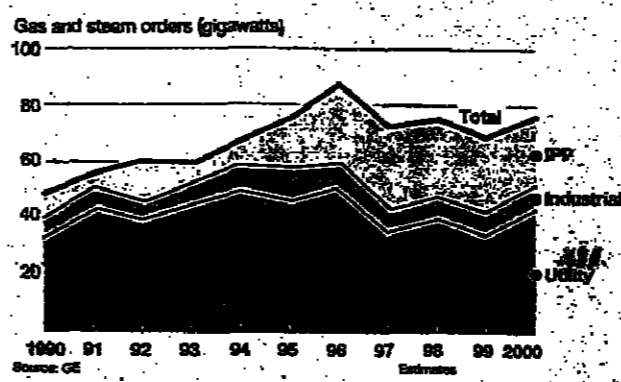
Usually, a power station can only be financed in this way if there is a firm agreement from a utility to buy its output - the power purchase agreement.

The main risk is that the finance is tied to a single scheme: if it goes wrong, the creditors have no access to other assets or to the assets of the equity investors in the project. Nevertheless, the role of electricity generation at the

core of economic activity has given the industry a reputation for extreme stability of earnings. So, initially in the US in the 1980s, and later in the UK, lenders have been willing to take the risks in return for a premium over the rates of interest earned on corporate loans.

Even in developing countries with high political risks, developers have not found it difficult to secure equity for schemes, especially if a top-class equipment supplier supports the project. The attraction is the high rates of return available if the project goes well - ranging from 15 per cent in the US to 20-25 per cent in developing countries.

But loan finance has been harder to put in place, mainly because banks are obliged to take more account of the potential risks than developers and because banks are reluctant to tie their funds up for too long. The last consideration is important in power station finance because plants have long lives - typically 25 years or more. Ideally, the borrowers would like to spread loan repayments over this time, but banks are not eager to lend for more than 10 or 15

**Market shift to Independent Power Producers**

years. The solution has been to finance a project for the first 10 years and refinance it later, often after construction is complete. But in the past five years, financiers have increasingly looked to bonds - with issue lives of up to 25 years - to close the financing gap.

Starting with private placements, the market developed rapidly in the US. In 1993, the first IPP bond was listed on a stock exchange, under the limited terms of rule 144A of the Securities and Exchange Commission. This issue, by Siba Energy for a 1,000MW scheme at Scriba, New York state, paved the way for a host of other North American IPP bonds. In Britain, the market has developed more slowly but has more than kept pace with the US in financial innovation.

In January this year, First Hydro, the pumped storage business of the National Grid, was bought by Edison Mission, the US energy development company, for \$235m. Some \$400m of the purchase was funded by 25-year sterling bonds issued by First Hydro, with no recourse to Mission.

BZW, the lead manager, says the issue broke new ground because First Hydro has no long-term power purchase agreements with electricity distributors.

Pumped storage is a special case. Mr Mabon believes that the next challenge will be the financing of merchant plants - thermal power stations with no power purchase agreements, selling electricity on short-term contracts to utilities.

In developing countries, non-recourse bonds for project finance are only just beginning to make an impact on power generation. Their development was interrupted by the 1995 Mexican debt crisis, which saw many US holders of Mexican bonds selling their paper and cast a shadow over finance for developing countries in general.

In China, potentially the largest market for IPPs in the developing world, the first IPP scheme has yet to be completed. The Chinese government and would-be developers have still to resolve important issues, including rights of ownership of power stations. Export credit guarantee agencies - such as the US Export-Import Bank and Germany's Hermes - have also to finalise their policy towards financing IPP schemes in China.

In India, only two IPP schemes have seen their financing completed - the politically controversial Dabhol project in Maharashtra state and the Gujarat Torrent scheme in Gujarat. Other projects have been delayed by arguments over state guarantees and power purchase agreements.

However, other countries have brought many more schemes to fruition, including Malaysia, Indonesia, and Pakistan, which has about six IPP schemes. Investment banks believe that the Paki-

stani schemes are particularly significant because the projects have been funded despite the general perception that Pakistan is a politically unstable country with high risks for investors. The schemes have been completed because they have been strongly supported and pushed through by the central government on terms attractive to investors.

Elsewhere, the most significant financing has been for Jawa Power, a \$1.7bn coal-fired plant at Faton, east Java, on the site of an existing power station. The developers, led by Siemens of Germany and the UK's PowerGen, together with JP Morgan, their financial adviser, have put together a package of equity and loan finance which includes \$200m of bonds placed privately with US institutions.

Mr Tim Leissner, a vice-president of JP Morgan, says this is the first time such bonds have been issued for a power project in an emerging country before the plant was built and with no guarantee of completion from the developers.

Mr Wilson says the next step will be the opening up of the rule 144A market for developing country schemes. Because many US institutional investors can only buy publicly-traded instruments, such development would give developers access to billions of dollars of savings.

Servicing: by Stefan Wagstyl

**Better profits to be made**

Liberalisation of the power industry and the development of independent power producers has changed the nature of the service business

For power engineers, the ultimate professional satisfaction may still lie in building a big new state-of-the-art plant from scratch. But for power engineering companies, better profits are increasingly to be made from the more mundane business of servicing and renovating existing plants.

The intense competition for contracts for new power stations in the 1990s has driven plant suppliers to expand their service business. At General Electric, for example, service now accounts for just over half the \$4bn revenues of the power systems division, compared with one third

five years ago. The (undisclosed) share of profits is even higher.

GE benefits enormously from having the largest installed base of turbines of any producer. But others are not far behind. At Westinghouse, service's share was about 50 per cent of sales of \$3bn. At ABB, the figure last year was about 20 per cent of the \$10.3bn turnover in power generation.

Mr Armin Meyer, who runs ABB's power business, says: "Service revenues are growing faster than new business. And if you do a good job, you can get a nice margin."

Mr Ernie Gault, vice-president for service and parts at GE, says: "It is not just a question of selling spare parts. It is all about getting much closer to the customers and helping them to develop solutions to their problems."

The expansion of their service businesses by the big plant suppliers has increased the competition for smaller specialist service companies. But the market as a whole has increased because power station operators are demanding higher

levels of service, partly in response to commercial pressures and partly because of technological changes which have created new opportunities in servicing.

The main shift in the market which has changed the nature of the service business has been the liberalisation of the power industry and the development of independent power producers.

Before deregulation, state-owned utilities typically bought high-specification power stations with a service life of 30 years or more and employed teams of in-house engineers to service their plants with parts purchased from the original equipment supplier.

In today's increasingly liberalised markets, new independent power producers and old-established utilities alike are having to be more cost conscious. They are less likely to demand ultra long-life components, preferring to spread their costs over the life of a plant by spending more in later years on servicing.

Many operators have also reduced in-house service teams to save money,

finding it more economical to outsource such services.

At the same time, the arm's-length relationship between plant supplier and customer is being replaced by closer ties. Plant suppliers are being asked to invest in projects and sometimes play a role in its management long after construction is finished in build-operate-transfer and build-operate-own agreements with utilities.

The growth of independent power production in developing countries has added further demands for service skills, particularly in sites with little indigenous technical know-how.

With funds for new projects at a premium, there is also an increasing need for raising the efficiency of existing plants by improved servicing.

These changes in the market place have coincided with the rapid spread of computer-based technologies, which have allowed companies to develop increasingly sophisticated services.

By constantly monitoring turbines and other equipment in action, operators are able to develop a continuous picture of a plant's technical strengths and weaknesses. Instead of having to wait for a

break-down, operators can carry out preventative work in advance. They can also time routine maintenance more accurately, varying the intervals for different plants.

Manufacturers can take this monitoring one step further. By accumulating performance data from plants at different sites, even in different countries, they can build an extensive library of operating information.

**New technology permits development of remote-control servicing**

tion, allowing the development of even more sophisticated service packages.

New technology is also permitting the development of remote-control servicing. Specialist engineers in service centres can use modern telecommunications links to gather data and transmit possible solutions to problems without ever visiting the power station.

For power plant suppliers, the first fruits of these changes came in the late

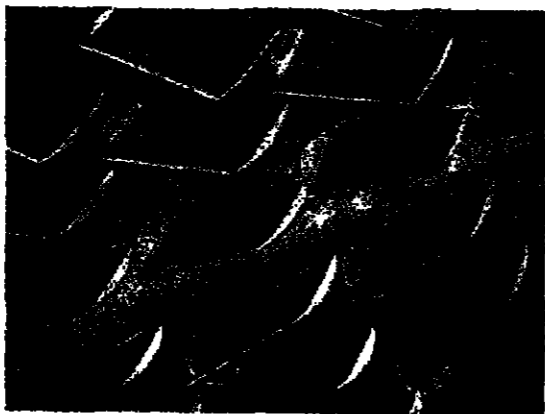
1990s, but they are multiplying rapidly now. GE, for example, has long-term operation and maintenance contracts for 13 plants, where GE staff run plants for customers for a fee based on performance. At 12 other plants the company has installed sophisticated monitoring kits to check the long-term performance of its turbines. Twenty more are in the pipeline.

ABB has signed a long-term agreement with Commonwealth Edison, the US utility, under which it is committed to raise the reliability and profitability of four plants. It will be paid from a share of the savings.

Mr Gault at GE forecasts a global web of computer, voice and video links in which engineers will easily exchange information and profit from each other's experiences.

"The business will be able to respond more effectively and more quickly to customers," he says.

These developments will not necessarily exclude the specialist service companies. They tend to be cheaper than the big plant suppliers. They also claim they respond more rapidly. However, they may find it increasingly difficult to compete with the plant suppliers' ability to offer integrated long-term service packages.

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**Nuclear fusion:** by Clive Cookson

## Encouraging research results

Europe lies somewhere between Japan and the US in the availability of funding for fusion projects

The political climate worldwide is becoming less hospitable to the expenditure of vast sums of public money on energy projects whose commercial pay-off lies at least 40 years in the future. As a result, the prospect that nuclear fusion will make a significant contribution to the world's energy supplies by the middle of the next century is receding.

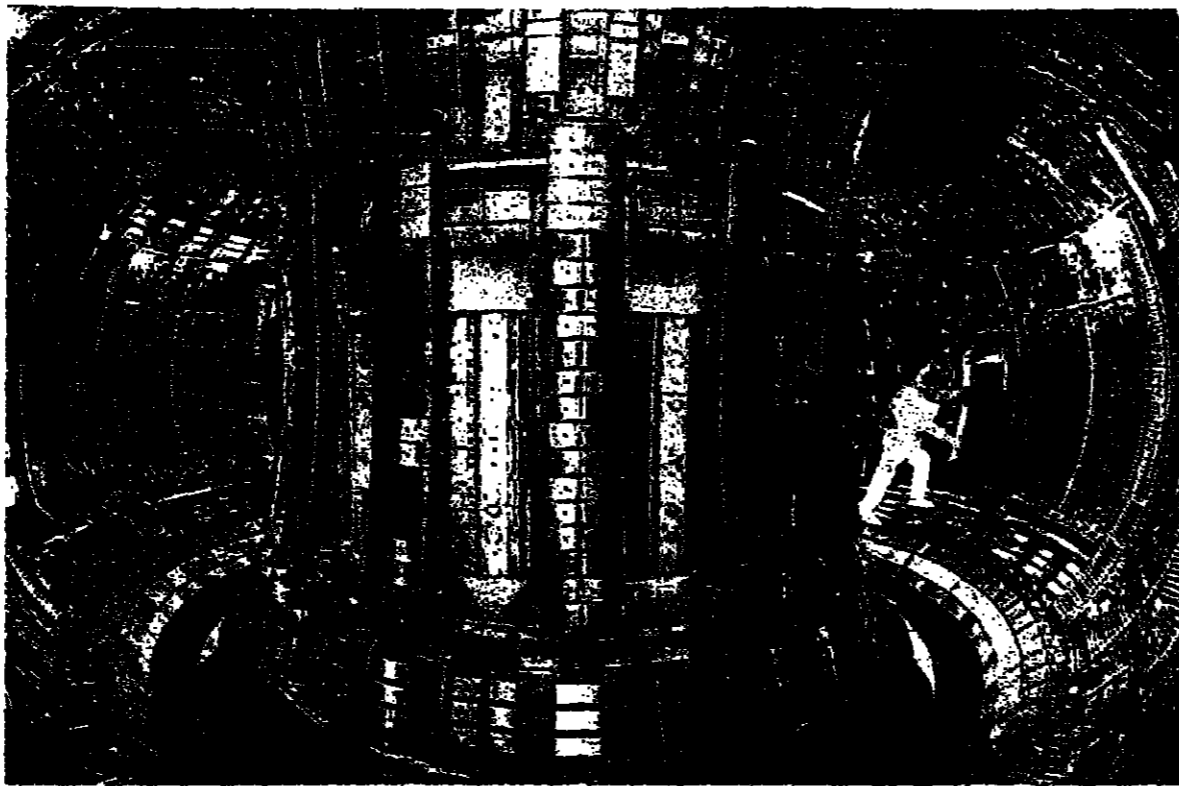
Nothing has happened on the technical front to speed the scientific case for fusion: that in the long run the best technology for generating electricity cheaply, cleanly and on a large scale is to replicate the power of the sun on Earth. This means the controlled release of energy through fusing together the nuclei of very light atoms - as opposed to today's nuclear industry which splits heavy atoms.

On the contrary, recent research results from fusion experiments - notably the Joint European Torus (JET) at Culham in Oxfordshire and the Tokamak Fusion Test Reactor at Princeton, New Jersey - are encouraging. Both JET and TFTR have generated brief bursts of fusion energy in a superheated gas "plasma" within their doughnut-shaped reaction vessels; analysis shows that the plasma was heated by the release of energy in the way that would be required to sustain a reaction in a commercial fusion reactor.

JET and TFTR are themselves large and expensive projects, costing several hundred million pounds each. But the next stage, the International Thermonuclear Experimental Reactor (ITER) that would demonstrate the technical feasibility of fusion as a large-scale energy source, has an estimated price tag in the \$6bn to \$10bn range. ITER would generate 1,500MW of power - as much as today's largest nuclear plants - for periods of up to 30 minutes.

Engineers from the European Union, US, Japan and Russia started designing ITER in 1982 as a global project. Their work is scheduled to finish in 1998. Then the hard bargaining will begin, over the location and funding of ITER.

The US government is cutting back particularly hard on its support for fusion; there may not even be enough money to keep the Princeton TFTR running after next year. So the prospects of the US putting a lot of money into ITER look slim. On the other hand, Japan - which remains strongly committed to long-term nuclear research and develop-



Inspecting the interior of the JET vacuum vessel. Last month, the EU agreed to extend the JET project until the end of 1999. Picture courtesy of JET.

ment - has suggested informally that it might be prepared to meet most of ITER's costs, if the other participants accept a Japanese location for the project.

Europe lies somewhere between Japan and the US in the availability of funding for fusion projects. Last month, the EU agreed to extend the JET project, which had originally been scheduled for closure at the end of this year, until the end of 1999.

JET recently completed a nine-month shut-down, during which its "divertor" (exhaust system) was changed to improve the reactor's operational capacity. A series of experiments later this year and next year will use, for the first time, the 50:50 mixture of deuterium and tritium (isotopes of hydrogen) that is optimum for fusion.

So far, most JET experiments have been aimed at learning how to confine and control a plasma at temperatures above 100mC rather than to achieve fusion. They have used only deuterium, because this does not make the reactor vessel radioactive.

In 1991, however, 10 per cent of tritium was added to the deuterium. This produced significant fusion power - peaking at 1.7MW and averaging 1MW over two seconds - and provoked ecstatic newspaper headlines about science taming the power of the sun. Jet

researchers expect the 50:50 mixture to generate 10MW of fusion power over several seconds but it will not achieve the "ignition" point at which the reaction becomes self-sustaining.

At the same time, Euratom, Europe's co-ordinating body for fusion research, has agreed funding for two smaller new machines. One is the Wendelstein 7X "stellarator" in Germany. The stellarator is an alternative containment vessel to the tokamak used for TFTR and JET. It holds the plasma in place solely with a magnetic field generated by external coils, while the tokamak uses the plasma itself to generate a current and hence a further magnetic field.

The other new machine will be the Mega Amp Spherical Tokamak (MAST), to be built close to JET at Culham. It will develop the idea that a round tokamak may give better results than the doughnut-shaped torus.

So far the vast majority of funds for civil fusion research have been devoted to "magnetic confinement" projects. Magnetic fields are used to hold the plasma in place and prevent it touching the reactor walls, because no materials can withstand temperatures of millions of degrees. But some scientists believe that a radically different approach to fusion - inertial confinement - deserves more attention. Here, a powerful laser

or ion beam is used to compress a tiny pellet containing deuterium and tritium so fast that the fusion is complete before the plasma can expand and extinguish the reaction.

An inertial confinement reactor would generate power by burning a steady succession of pellets, each weighing no more than a few milligrams. The process would be like exploding a series of miniature H-bombs once a second - and indeed most inertial confinement research was a classified military secret until the 1990s because its main application was to develop nuclear weapons.

Now that inertial confinement is being declassified it is attracting interest as potentially a more flexible and cheaper alternative to the multi-billion-dollar reactors that are likely to be required for generating fusion power through magnetic confinement. But no serious engineering design work has yet been done for a possible inertial confinement reactor.

With these new possibilities opening up - and possibly offering budget-conscious politicians a good reason to postpone making a decision on ITER - it seems likely that fusion will continue to justify the critics' old quip that its commercial reality always lies about 40 years in the future.

**Nuclear power:** by Simon Holberton

## Focus is on the east

The prospect of a new nuclear station being built in North America or western Europe is remote

In this 10th anniversary year of the Chernobyl catastrophe in the Ukraine, the world's nuclear power industry is doing a little better than might have been expected.

The understandable nuclear allergy which the Chernobyl disaster produced seems to have had only muted effect on the plans of governments to install nuclear power stations.

At the end of 1995, according to the International Atomic Energy Agency, the Vienna-based international nuclear watchdog, there were 39 nuclear reactors under construction for the generation of electric power.

If all were completed this year - which they will not be - their collective output would be equal to 10 per cent of installed capacity of the world's 437 nuclear power plants currently operating in 30 countries.

These have a design capacity to generate 343,793MW of electric power; reactors under construction will add 32,594MW.

The aggregate figures disguise, however, a pattern of future power station development skewed towards the Far East. The prospect of a new nuclear station being built in North America or western Europe is remote.

Westinghouse, for one, sees little hope of new orders in the US or western Europe before 2005.

It believes that even France, western Europe's leading proponent of nuclear power, is at the limits of nuclear development with 76 per cent of electric power generated by nuclear plants.

However, Siemens, the German manufacturer, has developed with Framatome of France a European pressurised water reactor (EPR) which Electricité de France plans to use for the replacement of decommissioned plants.

But, underlining the straitened times in the industry, Siemens has seen nuclear pow-

er's share of its business change from 70 per cent of equipment sales to 30 per cent of sales today.

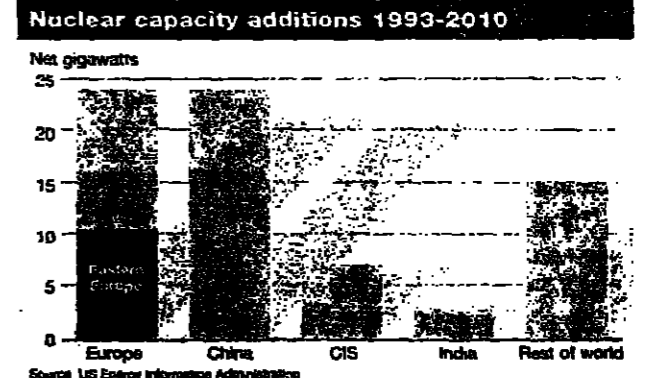
In the west, the issue is one of maintenance and plant life extension. The biggest factor to the profitability of a plant is availability. Reducing the time a power station is out of action has become a key concern of operators.

Westinghouse believes it can cut operating costs by 20 per cent by reducing "outages" for maintenance. Traditionally, outages used to be planned 90 days ahead of shutdown;

The main opportunities are in China which alone has plans for 20 1,000MW plants. It currently has installed capacity of 2,300MW, mostly located at Daya Bay in Guangdong.

China's coastal regions remain the likely sites for future development. Most of its massive coal reserves are located in remote inland areas and is difficult to transport to the more economically vibrant coastal areas.

Taiwan is also pushing ahead with nuclear power development. In May, Taiwan



increasing the planning process to a year can shorten the period of outage.

So, too, can changes in work practices. Ten years ago, maintenance used to consist of separate packages of services for pumps and line, another for fuel, and so on. Now Westinghouse offers an integrated package with cross-skilled workers performing more than one maintenance task.

This has led to a 20 per cent cut in man days expended on an outage. In all, outage times have been cut from 80 days to 30 days.

In terms of new power station orders, manufacturers are looking to eastern Europe, the former Soviet Union, and Asia as the market which will drive the industry forward.

Siemens has signed a memorandum of understanding to build a 640MW pressurised water reactor near St Petersburg. The company is also active in advising on maintenance and safety in Russia and eastern Europe.

Power Company (Taipower), the state electric utility, awarded a contract for two reactors and related equipment to General Electric of the US. The GE bid of \$1.8bn beat competition from ABB's US subsidiary, Combustion Engineering, and from Westinghouse of the US, which teamed up with Nuclear Electric, a subsidiary of British Energy of the UK.

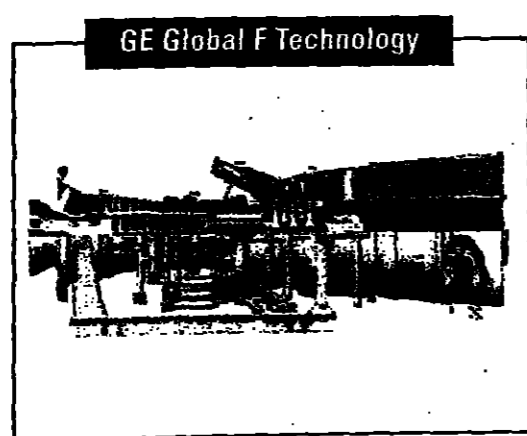
Japan wants to build new plant but has put further development on hold in the wake of the Kobe earthquake and problems with the Monju fast breeder test reactor.

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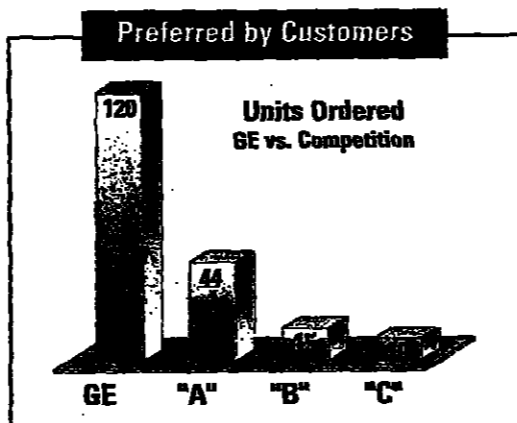
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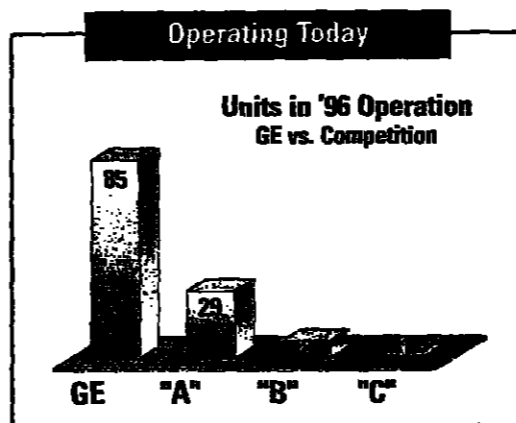
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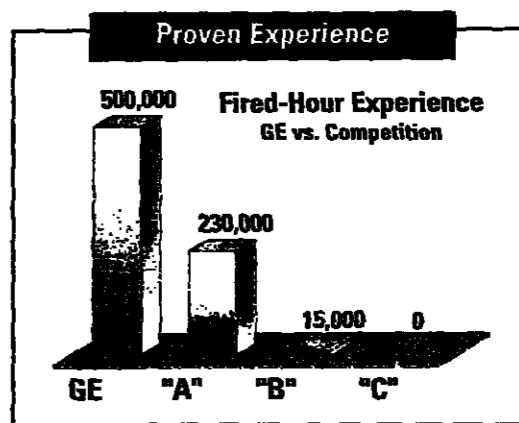
Output has grown more than 20% - to 168 MWs for the 7FA and 240 MWs for the 50 Hz version, the 9FA. Efficiency tops 57% in combined cycle - up to 4% better than most operating competitive models. On a per kilowatt basis, GE F technology plants are the cleanest in the world, proven to reduce NOx and CO emissions to single digits.

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Important: None of the advanced F technology features - high temperature alloys or aero-designs - were responsible for the quality issues.



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GE Power Systems

## 6 POWER GENERATION EQUIPMENT

Aeroderivatives by Andrew Baxter

## Increasingly popular

The industrial rationale for using aero-engines for land-based power generation is powerful

Some aero-engines never get off the ground. Instead, their efficiency and reliability are making them an increasingly popular option in land-based power generation for combined cycle outputs up to about 120MW.

While the aviation market is obviously the most important for aero-engine producers, modified versions of their machines have been sold to power producers since the 1950s, and to the oil and gas industry for both power generation and mechanical drive applications for nearly as long.

In the UK, Rolls-Royce - pioneer of the market for aeroderivative gas turbines - used to sell packages to the old Central Electricity Generating Board for use as occasional "peaking" units, says Mr Bob Sunerton, managing director of Rolls-Royce Industrial & Marine Power.

Elsewhere, North Sea oil and gas producers, for example, appreciated the machines' light weight, quick start-ups and the supply of "a lot of power from a small package." The industrial rationale for using aero-engines for land-based power generation is powerful.

It cost General Electric of the US more than \$1bn to develop its CF6-80C2 aircraft engine, an investment which would be very unlikely for an industrial machine, says Mrs Lorraine Bolsinger, general manager for marketing at GE Marine & Industrial Engines. GE M&I's

biggest gas turbine, the 44MW LM6000, shares 90 per cent commonality with its sister aircraft engine, allowing M&I to benefit from economies of scale and proven reliability.

"The big dollars have already been spent, and you don't want to do a lot to modify the machines for land-based power generation," says Mrs Bolsinger. The main distinguishing characteristic is that aeroderivative gas turbines do not have fans. For power generation, they are supplied hooked up to a generator, while for mechanical drive applications, the turbines drive a compressor.

The list of aeroderivative gas turbine producers is, by definition, much the same as that for aero-engines, although the priorities accorded to the market

vary. In the power generation market, GE is the biggest manufacturer, followed by Rolls-Royce. Pratt & Whitney has a much smaller presence.

However, both the two main manufacturers emphasize that this is no cosy duopoly - and indeed there is no aeroderivative gas turbine market as such. Not only do GE and Rolls-Royce compete with each other for orders, they are also battling against producers of heavy-duty or "frame"-type gas turbines which are not aeroderivatives, even if some of their design features are borrowed from aero-engines.

This is particularly the case in the larger power output categories, says Mr Sunerton, while at the smaller end of the market there is also competition from diesel engines.

Just to add to the complexity, the heavy frame "rivals" include companies closely related or at least linked to the aeroderivative producers - other divisions of GE, or Westinghouse, with which Rolls-Royce has strong links.

There is even competition within the GE aeroderivative gas turbine business, because GE sells its gas turbines through a worldwide network of original equipment manufacturers (OEMs) which package the units. This can lead to one of GE's OEMs competing for an order with another, says Mr Mark Axford, vice-president of Stewart & Stevenson International. Its parent, Houston-based Stewart & Stevenson Services, is the biggest of GE's OEM packagers.

GE estimates that the mar-

ket for gas turbines in the 100MW-120MW range is about 8 gigawatts (8,000MW) a year, or a third of the total gas turbine market. This includes oil and gas and industrial markets as well as power generation, and roughly 40 per cent of gas turbines sold in this segment were aeroderivatives. Rolls-Royce estimates that, for power generation alone, the aeroderivative gas turbine market was 1,900MW last year.

Mr Sunerton points out that the aeroderivative producers have benefited from the same factors that have propelled the heavy frame gas turbine market in the past 15 years - the ready availability of gas, its cost, efficiency and environmental profile. But, he says, there are a number of factors that are helping aeroderivatives increase their share. First, the "technology push" is with aero-engines, and new materials and cooling technologies will help them stay ahead in the efficiency race.

Secondly, deregulation and changes of regulation in the power industry are making it harder to fund large capital projects. In independent power production, for example, it is easier and quicker to put together a 100MW project than one for 600MW, whether it is sited in the US or a developing country. "The lower the value of the project, the fewer bankers and lawyers are involved," says Mr Sunerton.

These factors, along with much-improved reliability after some problems in the 1970s, are pushing aeroderivative sales forward.

By combining two gas turbines with a steam turbine, the biggest power station project that the aeroderivative producers typically serve is about 120MW. As Mr Axford points out, there is no aeroderivative option at 200MW - "they don't make planes that big." But it is at the top of the aeroderivatives' power range that the competition with heavy frame



Key weapon: the first industrial version of the Rolls-Royce Trent on test

rivals is fiercest.

The customer's choice of gas turbine type could depend on the type of project, says Mrs Bolsinger. "Aeroderivatives have high simple-cycle efficiency, but very low exhaust energy - they don't make a lot of steam," she says. "So if you need a lot of steam for cogeneration, they may be a disadvantage. But if efficiency is the most important criterion, the aeroderivatives may be a better fit."

The intended operating profile is another important criterion, she says. Aero-engines are designed to be switched on or off several times a day, so aeroderivatives can be "cycled" similarly with no impact on maintenance requirements. As for the cost, the initial price for an aeroderivative package can be more expensive than its heavy frame equivalent, says Mrs Bolsinger, because the machines' ruggedness depends

more on modern materials technology than on sheer weight. But better fuel efficiency and lower operating costs can offset this over the life cycle of the plant, she says.

As part of the broader market for gas turbine power generation, the aeroderivative producers have had to weather the same pricing pressures as those faced by the heavy frame brigade. They have also witnessed a similar change in their market profile as the big opportunities shift away from North America towards developing countries.

Mrs Bolsinger says the US market for aeroderivatives is "indefinitely stalled" because of uncertainty over electricity regulation and the future structure of electricity distribution. The result, she says, is a change in customer profiles. Traditionally, only 30 per cent of GE M&I's power generation customers were international.

Now, only 10 per cent are domestic.

The best growth prospects, she says, are in Asia and Latin America, where the short delivery times for aeroderivatives - six to nine months on average - are an attraction for power-hungry customers. Last year alone, new power generation markets for GE M&I opened in countries including China, Tanzania and Ecuador.

At Rolls-Royce, Mr Sunerton says south-east Asia is probably the fastest-growing area for aeroderivatives because of its strong infrastructure growth and rising per capita incomes. But he also sees good growth prospects in both western and eastern Europe. This global pattern is expected to continue for a few years at least, although Mr Sunerton believes that the US market, while currently stagnant, will eventually regain its former importance. He also foresees slightly stronger growth prospects for aeroderivatives in power generation markets than in oil and gas or marine sectors.

Technology developments will, inevitably, follow those in the original aero-engines, although they tend to lag a few years until reliability is proven. Both GE and Rolls-Royce have managed big gains in efficiency with their largest machines, respectively the LM6000 and the industrial version of the Trent - which enters service shortly and which Mr Sunerton sees as a key weapon to help the UK company overhaul GE's lead in power generation. Both have also made progress on reducing emissions with dry low-NOx technology.

With simple cycle efficiency at 42-43 per cent, further gains may be more modest, and the next big event in the industry could be an industrial version of the new 100,000lb-thrust GE90 engine, now in service on Boeing 777s. "We're looking right now at how to develop that," says Mrs Bolsinger.



General Electric's LM6000 gas turbine on test with Stewart & Stevenson, the biggest of GE's OEM packagers

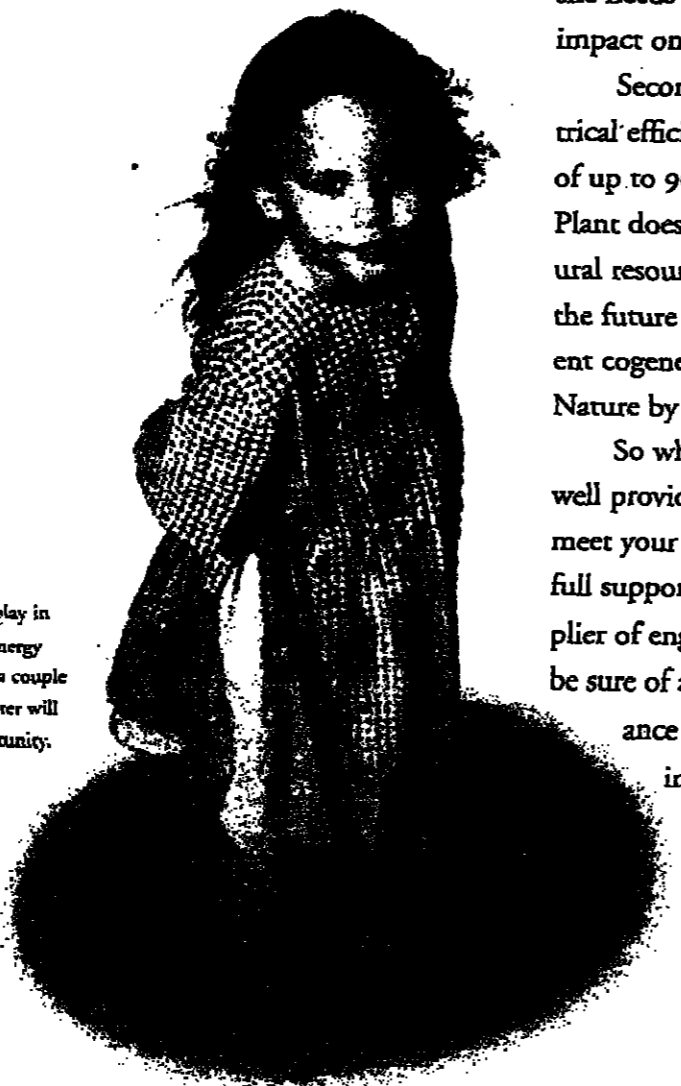
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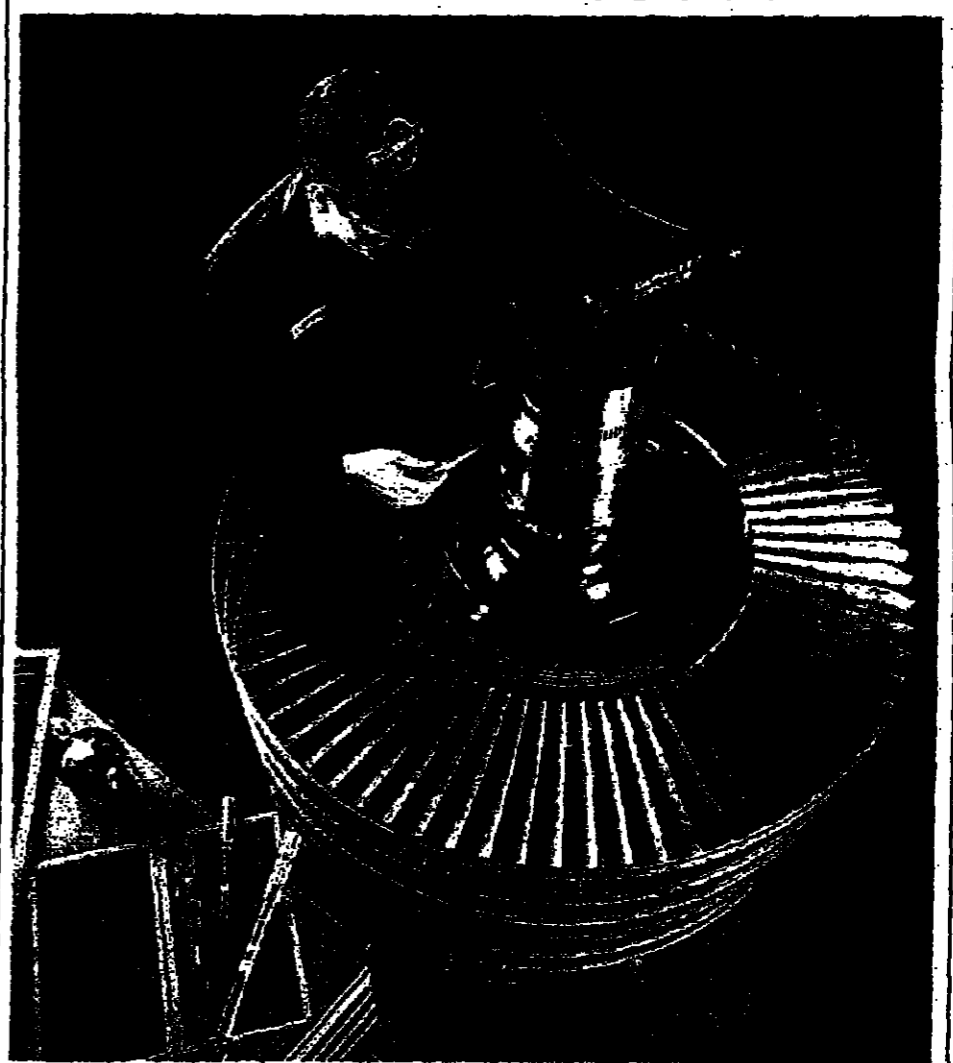
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Boosting up international sales: Stewart & Stevenson build power station packages around GE gas turbines

PROFILE Stewart & Stevenson

## International sales soar

The growing international popularity of aeroderivative gas turbines and the slowdown in the US market is illustrated by recent trends at Stewart & Stevenson Services, one of a dozen companies worldwide which build power station packages around General Electric gas turbines.

Last year, more than two centuries after Captain Cook, the company "discovered" Australia, selling five of GE's LM6000 turbines for power generation at several mining sites. It also made its first foray into Tanzania, as partner in a joint venture that brought two LM6000s on line some 160 days from the signing of the contract.

The slowdown in the US market has been caused by deregulation of the electricity business. "We saw it enough in advance to beef up international sales," says Mr Mark Axford, vice-president of Stewart & Stevenson International.

International sales have grown dramatically over the past year, says Mr Axford, and 75 per cent of new power plant packages are now destined for foreign job sites. Not all are necessarily sold outside the US, though - a recent deal to supply three units for an Euron project in China, for example, was

clinched in Houston.

Stewart & Stevenson, founded in 1902, has been an authorised original equipment manufacturer (OEM) of LM gas turbines since 1978. Since then, it has sold more than 200 LM-series packages worldwide, and a total of 750 aeroderivative gas turbine packages.

Sales in its gas turbine business, which covers power generation and mechanical

drive markets, operations and maintenance, and technical services, have soared from \$44m in 1986 to \$538m last year, about 44 per cent of the company's total \$1.2bn sales last year. About 90 per cent of the gas turbine business is GE-related.

Mr Axford believes the OEM concept has proved very successful, with GE concentrating on producing the turbines and the OEMs producing and selling power station packages in many different, culturally diverse markets. "We know exactly what our customers in North America want," says Mr

Axford - a package that is assembled and factory tested at full power before shipment.

This knowledge is now being used overseas.

The company's Power-Lease programme, developed originally for the US market, offers customers a turnkey power facility, financing, operations and maintenance. The concept is designed to appeal to countries which are deregulating their electricity market and looking for flexible, short-term contracts. Stewart & Stevenson builds its power station packages at factories in Houston and at Rheden in the Netherlands, but in the long-term it could begin manufacturing in Asia too, says Mr Axford, to better serve customers in the region.

This year has seen a slow start for the group - weak gas turbine equipment sales contributed to a fall in first-quarter net profits to \$6.7m from \$16m a year earlier. The company said it was unable to finalise several multi-unit gas turbine projects that it had expected to close in the first quarter, but expects to book a significant amount of gas turbine business during the rest of the year.

Andrew Baxter



PROFILE Westinghouse

# A split is almost certain

Mr Fran Harvey, a senior executive of Westinghouse Electric makes no attempt to disguise the gap between the US group's traditional industrial businesses and its newly-expanded media interests.

"There is no fit. These are really two distinct businesses," says Mr Harvey who is soon to take over as president and chief executive officer of the company's industries and technology group - the traditional industrial businesses, including power generation and nuclear engineering.

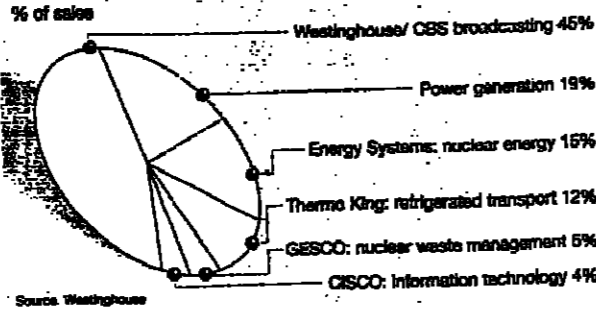
The mismatch between the two halves of Westinghouse has prompted the company to consider splitting itself into separate broadcasting and industrial businesses, as Mr Michael Jordan, chief executive announced earlier this month.

While Westinghouse has given itself until the end of the year to reach a final decision, analysts believe that a split is almost certain. It would be the culmination of the changes Mr Jordan has made since he started his effort to revitalise Westinghouse in 1993.

Mr Jordan first concentrated upon making the old-established industrial businesses more productive, reducing debts and cutting costs, including laying off 12,000 staff, a fifth of the total.

Then last year he dramatically expanded Westinghouse's broadcasting business through the \$5.4bn acquisition in November of CBS, the television and radio network. The shift in the

Present portfolio



group's centre of gravity away from manufacturing was extended with the \$1.1bn sale earlier this year of the defence equipment and office furniture divisions. Only last week, Mr Jordan went one step further with the \$3.9bn acquisition of Infinity Broadcasting, second-largest radio network in the US.

Dividing the group into two would help investors value each half more accurately and - Westinghouse believes - result in a bigger overall stock market value for the businesses. In particular, company executives think the broadcasting operations grouped around CBS would secure a better valuation if they were not encumbered by the industrial companies, with their pedestrian financial performance.

However, if the glamorous broadcasting interests are spun off, the future of the original core Westinghouse industrial operations seems less than clear. Many financial and industrial analysts believe the obvious conclusion will be the

break-up and sale of the industrial operations - including power engineering - to separate buyers.

But Mr Harvey, who earlier this year turned down an offer to leave Westinghouse and join Northrop Grumman, the defence division's new owner, says disposals are not on his agenda. "I didn't come back (to Westinghouse) to break it up and sell it. My mind is set on profitable growth."

However, he adds that disposals are not completely ruled out. "You can never say never," he says.

Mr Randy Zwirn, the executive vice-president in charge of power systems, uses almost the same words. "We

are not trying to sell our business. But you can never say never."

Such qualified denials are unlikely to quell speculation about Westinghouse's future role in manufacturing, including power engineering.

However, whether or not the business is eventually put up for sale, Westinghouse remains firmly committed to its development. Mr Zwirn says he is investing about \$100m a year and is spending an extra \$100m on a key joint venture in China - with the Shanghai Electric Company, China's largest power equipment maker. "I have access to all the capital I need," he says.

Rival manufacturers concede that Westinghouse's power systems business is now in better competitive shape than it has been for more than a decade. It is overcoming the effect of years of neglect before 1990, when it failed to keep pace with technological change, notably the development of gas-fired turbines, which soared in popularity at the end of the 1980s. The company's current resurgence dates back to 1988, when a team of executives from the highly-successful nuclear business - which



Core operation: nuclear fuel fabricated by Westinghouse and its licensee

pioneered the commercialisation of the pressurised water reactor - moved to the (non-nuclear) power generation division.

They reorganised the factories to cut costs and streamline production. They secured a commercial alliance with Rolls-Royce of the UK, which brought with it crucial gas turbine technology. They revived long-standing ties with Mitsubishi Heavy Industries of Japan, and Fiat, the Italian car

maker which also has interests in industrial equipment.

Westinghouse also created teams for managing and financing turnkey projects. As Mr Don White, the manufacturing director and a veteran of the transformation of the power systems business, says: "Before, we didn't even have a strategy. Now we know where we are going."

Sales in power generation rose from about \$400m in 1988 to \$1.77bn last year as

Westinghouse made inroads in the market, capitalising on its strong brand image. But amid ever-increasing competition, Westinghouse struggled to make adequate profits.

Last year, power systems made an operating loss of \$307m, down from a \$165m profit in 1994. The results were depressed by \$305m in charges relating to the settlement of legal disputes, dating back several years. One concerned the Philippines and the others the supply of allegedly faulty steam generators. However, even excluding these matters, the (non-nuclear) power business lost \$16m.

The division's profits were made entirely by the nuclear operations (called energy systems), which made \$14m, unchanged from 1994 and earned largely from service and renovation.

The pressure on margins has forced further cost-cutting in the energy systems division. In non-nuclear operations, the company is closing its factory in Pensacola, Florida, with the loss of 850 jobs, to concentrate production at three other sites - Hamilton in Ontario, Charlotte in North Carolina, and Fort Payne, also in North Carolina. The small Fort Payne plant, which employs 850, could also lose work to the Charlotte site.

Mr Zwirn says that the rationalisation is not bringing

any reduction in output, only in cost.

At Charlotte, the company is investing in new space and equipment to absorb the extra production transferred from Pensacola. Mr White says: "We may be small but we are second to no-one in manufacturing."

Mr Zwirn denies that Westinghouse's modest size in comparison to its top rivals - General Electric of the US, and Europe's ABB and Siemens - is a disadvantage. He believes that turnover in power systems, which totalled \$3bn last year, including \$1.37bn in nuclear and \$1.77bn in non-nuclear business, is sufficient to give Westinghouse an adequate presence in international markets.

He also believes strongly in the value of alliances. As well as its new joint venture in China and its agreement with Rolls-Royce, Westinghouse has technology-sharing and marketing agreements with Mitsubishi Heavy Industries in Japan, in steam turbines, and a three-way partnership with MHI and Fiat in gas turbines. Mr Zwirn says: "The massive cost of new projects means we all must co-operate."

Perhaps making a virtue out of a necessity, he adds: "An important element of our global strategy is not necessarily to be a dominant partner."

PROFILE Snell Hydromotor

# River power without dams

Building dams is a controversial business. Only last week, a Malaysian high court ruled that a government decision to build the \$5.5bn Bakun hydro-electric scheme in the jungles of Borneo had violated the law, after finding irregularities in how officials assessed its environmental impact.

Elsewhere, some countries are refusing to dam any more rivers because of concerns about the effects on local communities and ecosystems.

Recently, scientists have even questioned whether conventional hydro-electric power generation can be considered to be truly emission-free in cases where trees and vegetation are inadequately cleared from the reservoir area. Submerged in the reservoir water, they decay and produce greenhouse gases, studies have shown.

With many of the best sites for dams already taken, a big opportunity exists for generating power from rivers without having to build dams. This, at least, is what the UK inventors of the Snell Hydromotor believe. The machine does just that, and can also be used to generate power from tides.

The Hydromotor was designed by Mr Michael Snell and his father, Mr Leonard Snell, the controlling shareholders in Snell (Hydro Design) Consultancy. Michael Snell is a civil engineer and a former director of technical services at Stroud District Council, his father was chief designer at Rolls-Royce and was responsible for designing the engines for Concorde.

The machine was developed after the council asked Michael Snell whether he could devise a way to generate electricity from a stream and mill next to its new offices. The problem was in hydro-electric projects was that the "head" - the difference between the water level upstream and immediately downstream of the installation - was too low.

"Conventional turbines will not function well, or won't work at all, if the head is less than two metres," says Mr Geoffrey Linford, a civil engineer who is trying to find a commercial backer for the Snells. "The Hydromotor works down to a zero head."

At the heart of the machine are two four-bladed rotors mounted on shafts that are connected together by timing gears. These ensure that the rotors maintain their designed

angular position relative to each other. In generating mode, the flow of incoming water is divided by a deflector and directed to impinge on the outer parts of the rotor blades, converting the energy from the water flow into rotational power. The machine can work as a pump if the process is reversed.

The hydromotor would fit very neatly into low-head, high volume cascades, such as smaller drops on rivers, says Mr Linford. It could be used, for example, on the two-metre cascades built every two miles or so into irrigation channels on Peru's coastal plain, producing a significant amount of power even if each individual installation was small.

A prototype machine has been under test since last year by Professor Brian Brinkworth and his team at the University of Wales in Cardiff, and detailed results are due soon. Mr Linford says that, as the research continues, it is becoming increasingly clear that the machine could be used in a wide range of applications.

One application could be to replace the sluice gate, or as a combined sluice-gate-turbine, in river barrage schemes. Currently, the energy from the flow of the river goes to waste in many of these schemes.

Mr Linford says the Hydromotor uses simple technology - the seals and gears are the most sophisticated components - and as such it "lends itself very much to power generation in developing countries" where it could be manufactured easily.

For the same reasons, however, it has not gone down well with UK producers of high value-added turbines. As Mr Linford observes, it is the antithesis of the products they make.

Michael Snell has funded development so far and patent costs - the machine is patent protected in the US and Australia, and patents are pending for Europe and Canada. Funding is needed for the next stage - to build a full-scale machine at a demonstration site. That would allow a full technical assessment to be made, along with calculations of production costs and the costs per kilowatt of power.

Negotiations are under way with a UK company interested in bidding for the Hydromotor and Mr Linford is looking, ideally, for "an entrepreneur with some vision" to take the project forward.

Andrew Baxter



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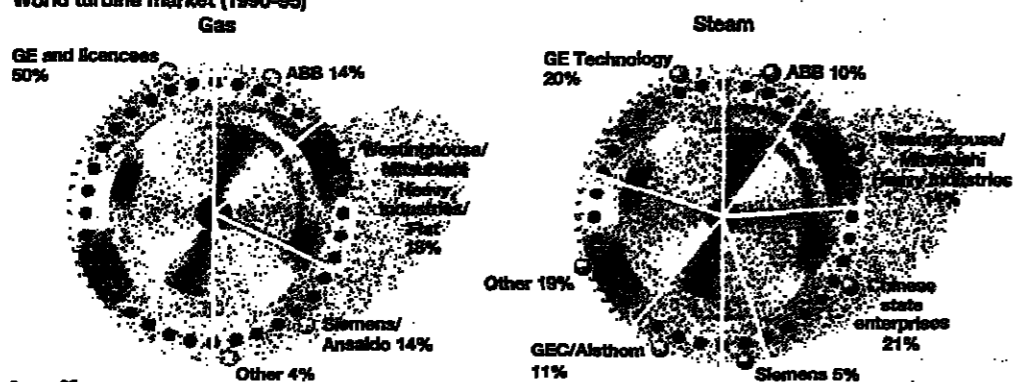
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## 8 POWER GENERATION EQUIPMENT

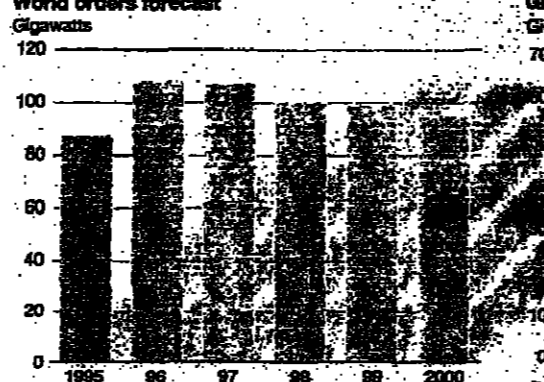
## MARKET OUTLOOK

With flat market forecasts and excess capacity in the industry, producers must compete vigorously for market share

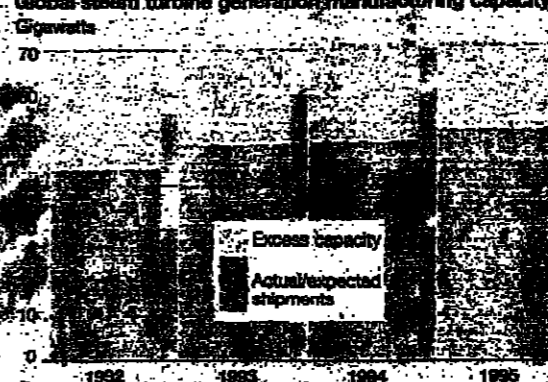
World turbine market (1990-95)



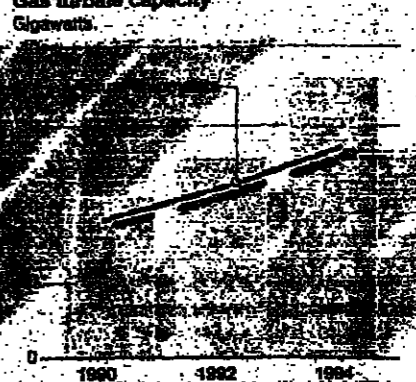
World orders forecast



Global steam turbine generating manufacturing capacity



Gas turbine capacity



## Squeeze on profit margins

Continued from Page 1

been placed, says Siemens. In nuclear energy, the prospects are even bleaker. The last three plants to be built in western Europe and north America have recently come into production, leaving empty order books. The only realistic prospect of selling a new nuclear power station is in east Asia, where Japan, South Korea, and Taiwan all have construction plans.

In the developing world, there is no shortage of electricity demand, notably in China, India and Indonesia. Projections of developing countries' electricity requirements suggest the world's installed power plant might need to grow 60 per cent by the year 2010, which would bring 1,750,000MW of orders to manufacturers - worth perhaps \$1,500bn-\$2,000bn. Detailed proposals for many of these projects are already available. However, the money is not. GE estimates that it takes up to seven years to bring to fruition a private sector scheme in the developing world, by which time the technical, commercial and financial requirements could all have changed.

In India, for example, Enron, the US energy group, and its partners, including GE, are still waiting for a final decision on the fate of the \$2.5bn Dhabol project for a gas-fired plant for the state of Maharashtra.



Westinghouse combined-cycle plant at Teeside, UK. Westinghouse closed its US factory at Pensacola this year

Although the scheme was one of eight private sector projects earmarked for rapid approval by Delhi three years ago, it has been dogged by political delays. First the government in Maharashtra state changed and the project had to be renegotiated. Then, this year's general elections threw the central government into turmoil. Even though the scheme is likely to get the go-ahead later this year, the delays have cost Enron and its partners dearly.

However, other, more developed countries are increasingly able to organise and finance

even very large schemes. For example, Malaysia earlier this month awarded a \$5bn contract to an ABB-led consortium to build the controversial Bakun hydro-electric scheme in the rain forest of Sarawak. It will be funded entirely by Malaysian finance.

China dwarfs other developing markets, accounting for about half Asia's expected demand for power generation plant in the next 10 years, and about a quarter of the world's. It is pressing ahead with the world's largest power scheme - the \$28bn Three Gorges hydro-electric project, which is

attracting enormous interest from equipment suppliers despite concerns about the environmental impact that have led the US Export-Import Bank to refuse its support.

The scale of the Chinese market has encouraged every big manufacturer to bid for business, driving down prices.

While companies report some caution in price-cutting this year, this may still be wishful thinking. Also, Chinese enterprises have imposed strict conditions, including obligations to transfer technology to Chinese factories. For example, GEC Alstom is transferring

know-how for steam turbines under the terms of a \$2bn contract for expanding the Daya Bay nuclear plant it built near Hong Kong.

The pressure to compete in global markets is changing the industry. The once-cosy ties between power plant suppliers and local state-owned utilities are being replaced by tough bidding wars between international rivals. The integrated companies which dominate the industry believe further consolidation could follow the last phase in the late 1980s, when GEC of the UK and Alstom of France pooled their power and transport businesses in GEC-Alstom and Asea of Sweden and Switzerland's Brown Boveri merged.

Today, industry speculation centres upon the power interests of Westinghouse, which last year dramatically shifted its centre of gravity from manufacturing to media with the \$5.4bn takeover of CBS, the broadcasting network.

Earlier this month, it said it was considering splitting the company between media and manufacturing. Westinghouse executives argue that such a split, recreating a tightly-focused manufacturing group, will strengthen rather than weaken the commitment to making power equipment. But some rival companies believe that a demerger could be a prelude to disposals.

Acquisitions and alliances are developing space as companies seek to share development costs, to secure access to markets and to build low-cost manufacturing centres in developing countries. ABB is expanding a manufacturing network in eastern Europe and the former Soviet Union which

employs more than 30,000 of the group's 211,000 staff and reaches from Croatia to Kazakhstan. GE is consolidating ties with Nuovo Pignone, the Italian diversified engineering group, where it bought control in 1994. And last year Westinghouse won a hotly-contested auction for a joint venture with Shanghai Electric Corporation, China's biggest power plant manufacturer.

The integrated groups argue that economies of scale give them an advantage. The costs of developing new technology are so big that even the largest companies suffer if things go wrong. For example, GE is spending more than \$100m correcting faults which developed in early units of its new F-series gas turbine.

However, fast-moving smaller companies are convinced they also have a future. They say that building power stations has always been a business for consortia - even

ABB, perhaps the most highly integrated manufacturer, does not usually do its own earthmoving and civil engineering works. They add that some customers prefer to buy turbines from one source and another important piece of plant - typically boilers in nuclear and coal-fired stations - from a second supplier. Babcock & Wilcox, the boiler manufacturing company belonging to McDermott, the diversified US group, retains a leading market share in boilers. Mr Robert Mady, vice-president for international sales and service, says: "Big companies are less flexible and less agile."

Niches, often substantial ones, provide good opportunities for smaller groups. For example, Rolls-Royce, the UK engine and turbine maker, has had considerable success in adapting aero-engines for use as medium-sized gas turbines for power plants. It has transferred the technology to

Westinghouse in return for a marketing agreement for the industrial Trent, the power-generation version of its latest gas-turbine aero-engine.

Meanwhile, companies are forging closer ties with their customers, especially with the independent power producers which Siemens estimates account for about 30 per cent of world orders. To get business, manufacturers are increasingly obliged to invest in projects and to help secure funds from other investors for both equity and loans. For example, GE Capital, the GE subsidiary, is as big and experienced in project finance as many banks.

Plant manufacturers are also investing more in their service businesses. They hope to recoup some of the money lost on low-margin plant sales with a stream of higher-margin revenues from after-sales activities. They are trying to exploit computer technologies which will enable them to monitor scores of power stations from a single test centre, saving costs and raising efficiency.

The skills required in the industry have never been greater: competition in technology, marketing, finance, service and international alliance-building, is putting enormous pressures on power equipment makers in the 1990s.

So far, most have reacted positively, improving their performance to levels few would have thought possible 10 years ago. But some groups are better placed than others for global competition. The next few years could see big differences emerging in financial performance as the winners capitalise on their advantages at the expense of the losers.



Global approach: A craftsman in Mannheim, Germany, aligns burners in a combustion frame. Components for ABB's GT24 gas turbine were manufactured in Mannheim and in Birm, Switzerland, then assembled in Richmond, Virginia

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# UK ENGINEERING

## In two minds about long-term prospects

The industry has been written off in the past, but the figures show its economic impact remains strong, Peter Marsh writes

Britain's engineering industry cannot make up its mind whether the glass is half full or half empty. Many companies have made an impressive recovery from the early 1990s recession, but worries remain about the sector's longer-term viability.

The straws in the wind are distinctly mixed. On the plus side there is a solid list of companies, many of them non-UK owned, announcing expansion plans or solid financial results. According to the industry optimists, a competitively priced exchange rate, relatively low wages, a "minimalist" regime of labour market regulations and few inflationary pressures are all factors making Britain a good place to site and run modern engineering plants. The UK appears to have taken on board better than some of its European competitors the "mass customisation" techniques needed to make an increasing range of complicated products simply and cheaply to meet different customers' demands.

"The potential for increasing volumes in UK manufacturing is as good as I've ever known it," says Mr John Hudson, chief executive of Wagon Industrial, a diversified UK engineering company selling a range of components to the automotive, retailing and distribution industries. The stock market indices (see Page IV) appear to support this point of view. Since September 1992, the average share price of quoted UK engineering companies has soared 120 per cent, compared with the 70 per cent rise in the FT-SE all-share index over the same period. Although engineering in the UK is used to being written off as a sector in near-terminal decline, its overall economic impact is substantial.

According to the broadest definitions of engineering, the sector has a gross annual output (including

sales to other parts of engineering) of some £150bn and employs nearly 2m people, roughly half the UK's manufacturing workforce.

But if there are some bullish indicators for the sector, recent economic data have painted a gloomier picture. As manufacturing growth has slowed in the past six months, engineering (which according to most definitions accounts for about 40 per cent of manufacturing in net output terms) has suffered too. The biggest problem is weaker export markets, particularly continental Europe.

In the three months to the end of April, output in mechanical and electrical engineering, comprising the core of the engineering industries, rose just 0.2 per cent in seasonally adjusted terms compared with the previous three months, according to the UK Office for National Statistics. This was well below the 2.7 per cent year-on-year growth rate recorded for 1995.

Concern has been sufficiently strong for the Engineering Employers' Federation, the main trade body for the sector, to warn earlier this year about the risks of the engineering industry sliding into another recession. The latest soundings, however, are more encouraging and indicate that the industry stabilised in the second quarter.

Even in parts of engineering where output gains in the past year or so have been impressive, frissons of anxiety are evident. In machine tools, for instance, where production has grown strongly since 1992 and where output this year is forecast to show a 20 per cent rise on last year, some executives are beginning to worry about what is in store for the sector when the next cyclical downturn hits home.

Skills shortages and training remain a problem, with many engineering executives saying the inability to attract the right calibre people, not necessarily those with high technical skills but also covering school leavers with good standards in writing and mathematics, is a big factor holding back expansion. "While so many factors are in Britain's favour (in engineering related industries) training and edu-

cation remain our Achilles' heel," says a senior UK government official involved with industrial investment.

The extent of conflicting views about the outlook creates difficulties in judging the next few years. "A lot of companies are expressing optimism, but much of this is at odds with the official macroeconomic data," says Mr John Deon, an industry analyst with Albert E. Sharp, the Birmingham stockbrokers specialising in manufacturing stocks.

Somewhat more sanguine is Mr Robin Leggett, publications manager of Marketing Strategies for Industry, a Cheshire-based consultancy concentrating on engineering sectors. "There's not a huge amount of confidence but most factors are pointing towards a pretty robust recovery," says Mr Leggett. "One of the problems is that there are too many doom and gloom merchants balking down the prospects for the industry."

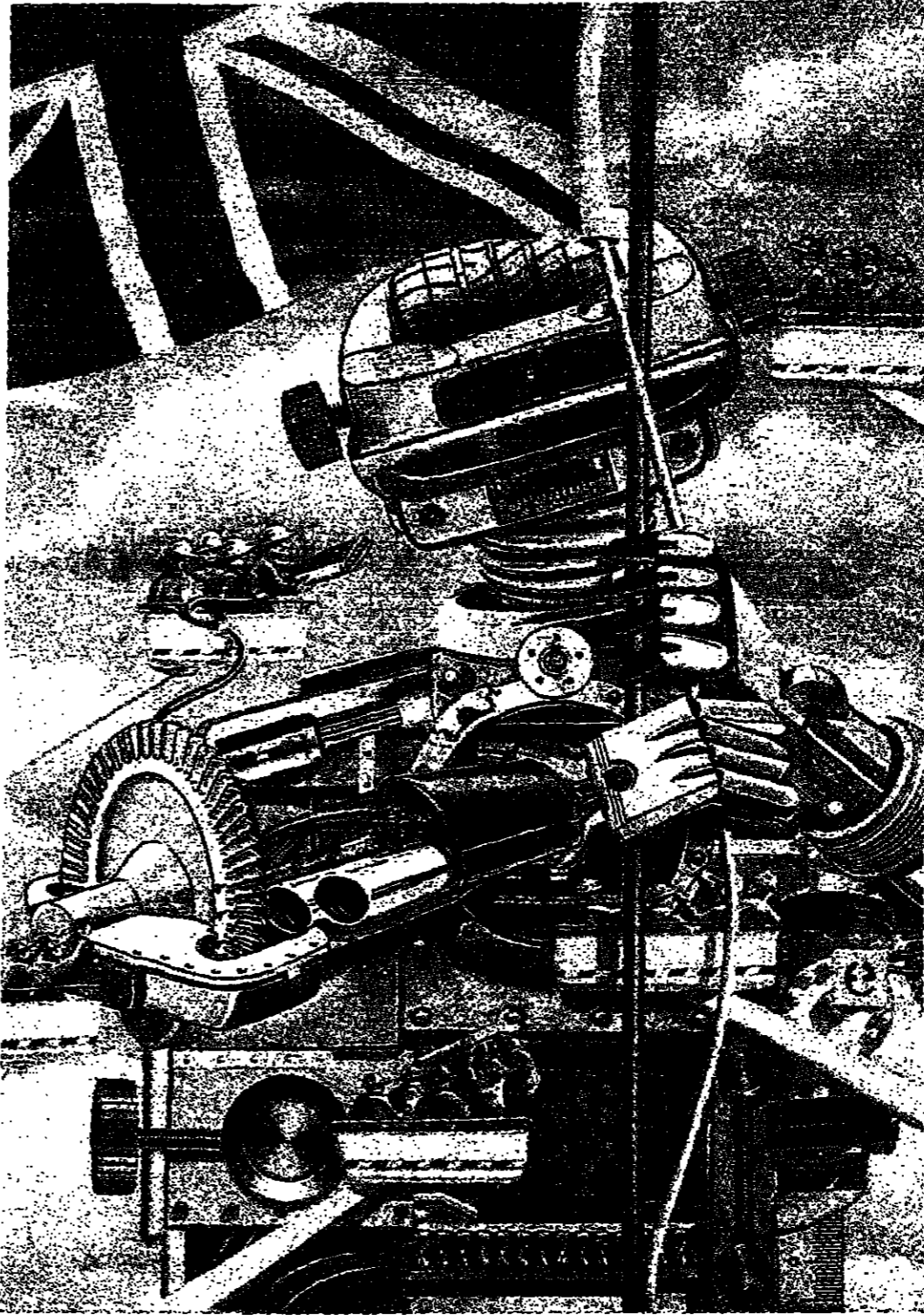
A spate of recent announcements generally support the idea that UK engineering has a reasonably bright future.

● The big guns of the publicly quoted UK engineering companies - including Siebe, TI, T&N and GKN - have all recently reported healthy financial results for 1995 and have said little to dampen expectations for this year and next. Combined pre-tax profits for these four companies in 1995, which gain a large chunk of their sales outside the UK, came to £1.1bn, 31 per cent up on the previous year, on total sales 14 per cent up at of £9.7bn.

● J.C.Bamford Excavators, one of Britain's biggest and most profitable privately owned engineering companies, has recently announced a four-year £132m investment programme in the UK up to 1998, well up on the \$45m it spent in the previous four years.

● An alliance between Fiat, the Italian automotive company, and Cummins, the US maker of diesel engines, is to spend about £70m setting up a new centre in the UK for worldwide engine development, geared particularly to new models of trucks, tractors and buses to go on sale early next century.

● Sandvik, the Swedish producer



of speciality steels and tooling which is one of Europe's biggest engineering companies, has unveiled a tripling of its UK investment programme in which it is spending nearly £40m over three years increasing output at its eight plants mainly in the Midlands

region; ● and Toyota, Nissan and Honda, the three Japanese car companies with UK manufacturing plants, are continuing their programme of "tutoring" UK-based component companies in up-to-date production methodologies in schemes which

have had a big impact on improving the overall commercial performance of the automotive parts sector. Added to this, the broad run of economic data over the past three years shows that the engineering industry has outperformed other sectors in manufacturing since the

depth of the recession. With some 40 per cent of its output exported, the industry was given a particular boost by sterling's enforced ejection from the European exchange rate mechanism nearly four years ago, an event which led to a large devaluation in the pound against the D-Mark and has helped increase the industry's competitiveness.

Output volumes in engineering and related industries between 1992 and 1995 expanded 11.1 per cent, compared with 7.9 per cent for the whole of manufacturing, according to the UK's statistics office.

Over the same period, output per person in engineering rose 30.8 per cent, compared with 10.9 per cent for all manufacturing, while engineering capital investment increased 40.3 per cent, as against a rise of 22 per cent in related spending in manufacturing.

According to Mr Brian Small, managing director of Ingersoll Engineers, a UK-based consultancy specialising in manufacturing, one of the keys to engineering's better performance relates to new management techniques based around organising teams of workers into small groups (or "cells") and devolving responsibilities away from managers and towards the factory floor.

"To satisfy customers nowadays with their increasingly wide range of demands, you've got to segment markets as much as possible. This way of looking at the world fits in with cell-based manufacturing methods. In bringing together these two ideas Britain is ahead of a lot of other countries," he says.

The point is reinforced by Mr Les James, marketing director at Servomex, a small East Sussex-based maker of gas-measuring equipment and an expert on manufacturing technology. "In the late 1980s probably only about 20 per cent of companies in manufacturing in the UK were attempting world-class manufacturing techniques. Now the figure has gone up to 35-40 per cent."

But according to Mr Geoffrey Robinson, non-executive chairman and founder of TransTec, a Midlands-based specialist engineering company and who is also a Labour MP, problems remain. "With the big contraction in industry in the 1980s, Britain lacks a lot of the technological intelligence and knowledge needed for a strong economy," he says. Others point to the need to expand research and development and investment in the industry to help lay the foundations for the next century.

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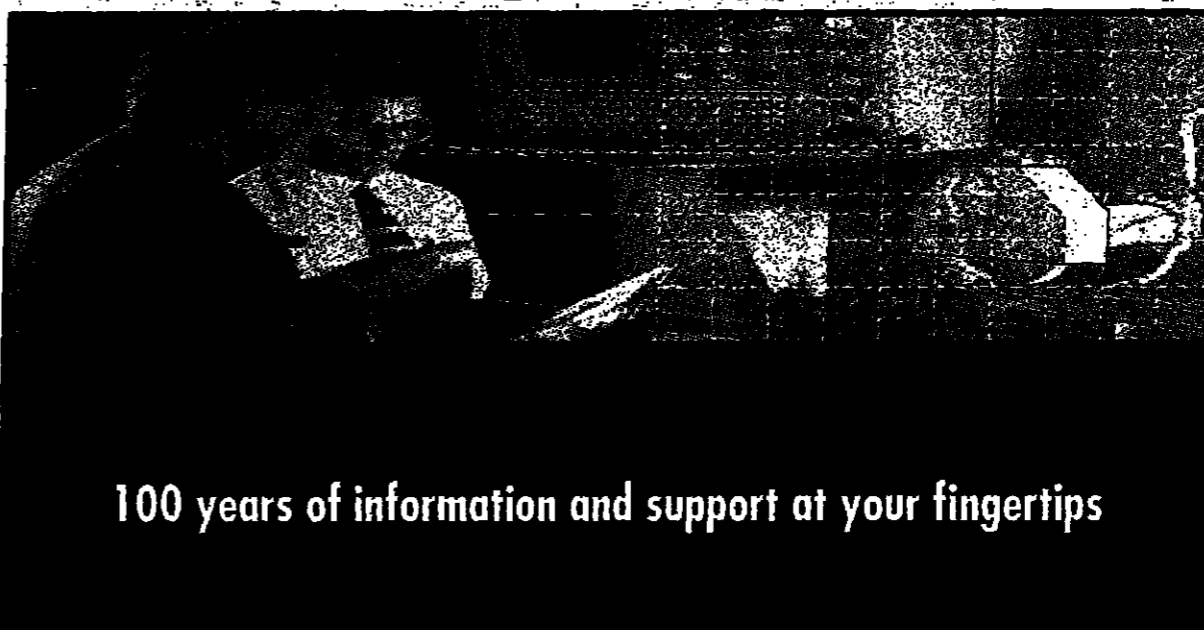
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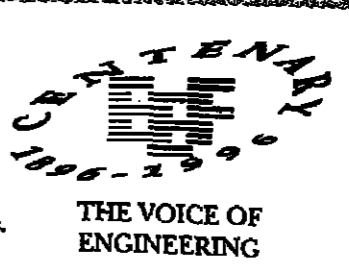
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II UK ENGINEERING

Car components: by John Griffiths

# Merging in unsettled times

Like the car industry itself, this sector has no choice but to globalise

This is a time of great upheaval in the UK motor components industry. In no case has this been more apparent than by the planned merger of Lucas Industries, the largest and probably best-known of the UK motor components group, with Vartiy Corporation, the US-headquartered diesel engines to braking systems group. The \$1.9bn merger will create one of the world's top ten motor components groups ranked by turnover and the second largest in one of the areas where the partners envisage some of the strongest synergies - braking and traction control systems. There is an outside chance

that the merger, scheduled to be completed by August, might not happen; and that Lucas might fall prey to a predator lurking as yet undeclared in the global motor components undergrowth.

One such would-be predator, the UK's BBA engineering group, has already sought to pounce - but has been driven back by its own shareholders. Like most industry analysts, they failed to see the logic of BBA seeking to acquire a much larger, mainly automotive group which not only was likely to have proved very difficult to digest but with which BBA itself had few obvious synergies. It was even more puzzling given that BBA has spent part of the past decade reducing its once-strong dependence on the motor components business by disengaging itself from a number of other motor component activities. But if the detailed logic of

BBA's own snap at Lucas was difficult to grasp, the underlying pressures which prompted it are not. They are, in fact, the same ones which have led Lucas and Vartiy to seek each other out and which will, doubtless, see other mergers and rationalisations in the not-too-distant future.

Like the car industry itself, the motor components sector is globalising. It has no choice. Any components manufacturer which wishes to remain a direct, first-tier supplier to the leading car companies must be prepared to follow them into every market in which they wish to manufacture or otherwise penetrate. That means a commitment by the supplier to its own manufacturing plants, joint ventures or efficient component supply chains in China, the Asian countries, Latin America, Eastern Europe or any other area of the developing

world on which car makers must, in future, rely for growth as the markets of Europe, North America and Japan move ever closer to saturation. But it is not only much increased geographical burdens that the car industry is placing on its suppliers. The car makers see themselves increasingly as assemblers of outsourced component systems rather than integrated manufacturers.

And they want their first-tier suppliers not only to manufacture ever more complex component modules and sub-systems, but to design and develop them as well. Several factors of vital concern to the components sector are implicit in this scenario. One is that suppliers capable of meeting these demands must be large and possess a great depth of technological resources. Another is that no supplier, almost irrespective of size, can hope to be a full-spec-

trum supplier of almost any type of system or module. Thus Lucas and Vartiy will concentrate on core competencies in specific areas such as diesel engines, fuel injection and braking systems, as will other potential long term first-tier suppliers like GKN, with its specialised expertise in constant velocity joints and related drivetrain systems.

The logical result of such developments, as the chief executive of Lucas Industries, Mr George Simpson, points out, is that "in a decade or so the industry will be dominated by 30 or so very large suppliers with a fully global capability." In its own attempt to be part of the global matrix, according to Mr Simpson, Lucas has been allocating two-thirds of future investment to support the build-up of a fully global capability. Some UK companies do not quite fit this tightly-defined scenario - not least Unipart,

Spending in the UK on components, 1994

Rover	£2.8bn
Ford (UK)	£2.2bn
GM	£2.2bn
Nissan	£2.0bn
Jaguar	£2.0bn
Honda	£2.0bn
Ford Europe	£4.0bn
Toyota	£4.0bn
VW	£4.0bn
Flat	£1.6bn
BMW	£1.6bn
Ferrari	£1.6bn
Mercedes	£1.6bn
Volvo	£1.6bn
PSA (Peugeot/Citroen)	£70m
TOTAL	£10bn+

Source: Lucas Industries, Cambridge University Business School

management quality to bring their operations up to scratch. And it has been a persistent refrain of the Society of Motor Manufacturers and Traders, the Department of Trade and Industry and individual vehicle makers that upgrading the quality and productivity standards of the smaller companies remains one of the greatest challenges facing the UK industry.

However, many have adapted, and are falling naturally into the category of second- or third-tier suppliers, as their customers become not car makers themselves but larger components groups that produce their own more complex modules and sub-systems. By any standards, the UK motor vehicle and components sector is a big industry. According to DTI statistics, it employs a total of 850,000 people, generates more than 10 per cent of UK exports and accounts for 5 per cent of GNP. The components sector itself comprises around 2,500 companies.

casts Professor Garsi Rhye, motor industry economist at Cardiff Business School. It will compete with the French to be Europe's second largest industry behind Germany.

Further good news for component suppliers is that European vehicle-makers which once shunned UK-produced components are importing more from the UK. They are attracted not just by low labour costs and the relative weakness of sterling but by the quality and productivity lessons they also believe UK suppliers have learned from their Japanese associates. Together Fiat, BMW, Renault, Mercedes and Volvo spent more than £1.2bn with UK-

based suppliers for their own production lines last year - more than double their annual spending at the end of the 1980s.

BMW, which bought Rover two years ago, is also seeking to increase spending on UK-produced components, thus further lifting car makers' total UK component spending well above Cardiff Business School's estimates of over £10bn for 1994. Indeed, the combined turnover of the top 10 UK suppliers alone is now in excess of £20bn, with much of their business in exports. With Ford, Rover and Vauxhall also collectively intending to invest a further £5bn in their UK operations over the next five years, the outlook for their suppliers has rarely looked so good.

Outsourcing: by Tim Burt

# An inexorable trend

Increasing costs and customer demands are making in-house production harder



Allen Yurko wants to develop 'standard industry building blocks'

The United Auto Workers Union used the 17-day strike to complain that jobs were being threatened and technological leadership put at risk by the increased shift towards outside suppliers. For industry executives, however, the industrial action marked a vain rearguard attempt to fight the inexorable move away from internal component production to cheaper units manufactured by special-

ist engineering groups. Over the past 20 years, many engineering equipment manufacturers have been founded and grown rapidly as feeder companies for carmakers, white goods manufacturers, aircraft companies and electrical groups. The rationale for GM and others has been that as products become more complex and as customers demand an increasing level of equipment, they can no longer afford to develop and build such products in-house.

Bosch, for example, is able to produce anti-lock braking systems equipment in the US at a wage rate of about \$20 an hour, compared with \$44 an hour from GM's internal brake business. In the event, GM won the right to source parts from Bosch while promising job security at its own plants. The stoppage, moreover, showed just how many components the US motor manufacturer already sources from outside. Pilkington, the UK glass maker, said it had been hit by the strike which forced it temporarily to shut down some of its plants. Lucas Industries, which supplies GM with electrical components, laid off some US employees and BSG International, which supplies wing mirrors, said it lost about \$1m of sales.

Such companies say car makers have turned to outsourcing more than any other

original equipment manufacturers (OEMs). Of the components used by most big international motor manufacturers, products such as brakes, brake pads, electronics, pistons, piston rings, fuel injection systems, mirrors, windows and seats are all offered by outside suppliers. Not only that, vehicle manufacturers are increasingly asking suppliers to provide integrated systems. One group might, for example, provide brakes, actuators and electronics in a ready-to-install package. By shifting responsibility for product development on to the suppliers, the OEMs can concentrate on issues such as brand management and vehicle design.

Mr George Simpson, chief executive of Lucas Industries, the automotive and aerospace equipment group, says: "They will retain final assembly and test responsibility for their vehicles but outsource larger and larger modules." He predicts that the OEMs might soon outsource their after-market logistics. His view is echoed by Egis, the Paris-based management consultant, which argues that carmakers may consider spinning off their engine divisions into fully independent companies. It estimates that over a number of years, a specialist engine maker would be able to offer engines of improved design at prices between 3 per cent and 7 per cent below competitive suppliers. That assumes, however, that such engine makers would have enough financial muscle to invest in new products and establish an international distribution network. In diesel engines, where outsourcing is already prevalent,

there is a marked shift to consolidation. Vartiy Corporation, the US engineering group which owns the Perkins diesel engine business, has agreed to merge with Lucas. The company says it needs to have a stronger balance sheet and larger supply chain to justify its plans to launch a new engine in each of the next four years.

While motor components manufacturers have enjoyed the largest swing to outsourcing, other engineering groups are also exploiting the trend. Siebe, the international controls and temperature appliances group, manufactures electronic power products for most of the world's largest goods manufacturers. Like Lucas, it too believes that it needs to be a systems integrator - taking over more of the design and development of components from the likes of Whirlpool and Electrolux. To that end, it paid \$250m earlier this year for Unitech, the power suppliers business, which should enhance the range of products it offers.

Mr Allen Yurko, Siebe chief executive, says it wants to develop "standard industry building blocks" for the power components and circuitry of products such as refrigerators, kettles and washing machines. "Modular systems is where the market is going. It's never seen to provide customers to outsource, but modular systems is where the market is going - it not just about good value but making things more efficient," he says. While engineering groups such as Siebe and Lucas are determined to become systems integrators, others such as GKN and TI Group are committed to refining existing products and taking them into more and more new markets. What unites all these groups is size. They argue that the days of a fragmented component industry supporting thousands of niche manufacturers are over. According to Mr Simpson at Lucas: "Globalisation means that there will be fewer but larger first-tier suppliers in existence as we enter the next century."

That trend has been driven partly by a paternalistic streak among the OEMs. While on the one hand, they may be willing to outsource a large number of components, they still want to exercise considerable influence over the design and quality of the products they receive. Boeing, like many other US manufacturers, has a preferred supplier status which it awards and withdraws from those contractors that meet its standards. Losing such status, as some companies have found to their cost, can seriously dent profits. Some European car makers also have a strong sense of nationalism when it comes to ordering parts. Peugeot-Citroen of France, for example, warned recently that it would not renew contracts with the French components group Valeo if it fell into foreign hands. Renault and Germany's Volkswagen were said to hold similar views.

That suggests that while OEMs are happy to take the benefits of outsourcing - such as lower cost products and reduced R&D spending - they are discriminating customers which demand the best of engineering groups. Not all companies are able to satisfy them, especially the medium-sized operators without global spread or market leading products. There are clearly large opportunities to win valuable business as a systems supplier, but the costs of developing new technology and developing an international presence may mean that only the fittest survive.

In addition to components, manufacturers are increasingly asking suppliers to provide integrated systems

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مكتبة العصر

Machine tools by Peter Marsh

# Playing its part

Cost-cutting, spending on R&D and patience have all contributed to recovery

Mr Lloyd Brandenburg, in charge of a big scissors production project in Wausau, Wisconsin, is buying British, and is proud of it. He is playing a part in the recent upturn in the UK machine tool sector.

He is project engineer at the US division of Fiskars, a large Finnish-owned maker of scissors and other cutting equipment. His plant in Wisconsin is among the biggest in the US, making 25m pairs a year mainly for consumers.

A key to efficient scissors production, all the more so because of heavy price competition in the industry from low-labour cost countries in Asia, is a high level of automation.

Highly specialised grinding machines, imported to Wisconsin from Jones & Shipman, a 97-year-old UK machine tool company, have helped keep Mr Brandenburg's business in good shape. The orders have been a factor behind the improved performance recently by Jones & Shipman which hit severe financial problems in the early 1990s recession.

Jones & Shipman, with annual sales of about £22m, is one of four UK-owned companies in the top 10 producers in Britain of machine tools. These 10 companies account for about 60 per cent of total UK production, which has grown strongly from the 1990s recession and this year is expected to be 20 per cent up on last year at about £300m.

The industry's rebound has put a new spring into a sector which has suffered a long and slow decline over the past 50 years with many venerable names having vanished without trace as a result of foreign competition and an uncompetitive exchange rate.

Jones & Shipman, however, has managed to cling on. According to Mr John Wareing, managing director of the Leicester-based company, this is partly due to strong support from its investors during its difficult financial period and a new strategy announced in

1992 that dramatically cut costs by putting more work out to specialised subcontractors as opposed to having parts made by the company's own workers.

Another key has been continuing spending on research and development, which at some £1m a year, says Mr Wareing, is high for a company of Jones & Shipman's size.

The so-called "creep-feed machines" sold to Fiskars - of which two have been shipped to the US in the past year at up to \$300,000 each - illustrate this point. Creep-feed grinding involves passing the workpiece under the grinding wheel at a slow pace, allowing greater metal removal in one pass, and thus increasing the customer's productivity. The feeders were originally used in high-precision industries such as aerospace but more recently have been used to make more humdrum articles such as scissors - where the hardware can be used to machine extremely precisely and quickly scissor blades with the minimum of human intervention. In the case of Fiskars' use of the machines, each piece of equipment can fashion up to 600 blades at a time.

Jones & Shipman took over the rights to its brand of creep-feed technology in the 1991 from Brown & Sharpe, the venerable US machine tool company which has since pulled out of the industry. It has poured much of its engineering resources into updating the technology, particularly the computerised controls needed to make the machinery capable of working 24 hours a day, seven days a week.

According to Mr Brandenburg, who was introduced to the creep-feed ideas originally through buying Brown & Sharpe equipment, Fiskars looked at the possibility of buying machines from other companies making similar hardware, such as Elb of Germany. However the company decided to opt for the UK models.

The biggest maker of machine tools in the UK this year is expected to be Cincinnati Milacron, the US-owned company which has a plant in Birmingham. Production from the factory is likely to be worth about £36m, with 80 per

cent of the hardware exported to companies in a range of industries including domestic appliances, aerospace and automotive.

The second and third biggest makers of machine tools in the UK are, according to industry estimates, Western Atlas, also of the US, and Yamazaki Mazak of Japan. Expected production this year from these two companies, both of which have been expanding quickly in the past two years, is put at \$90m and \$73m respectively.

Earlier this year, in a move that further underscored the better prospects for the industry, Heller, the privately owned German machine tool company, announced an outline plan to spend £15m in expanding its factory in Redditch in the Midlands. The plan could ultimately lead to 300 new jobs.

According to Mr Neil Mitchell, finance director of the UK sales division of Gildemeister, another German machine tool company but one which does not have a UK production base, prospects for his company's machines in Britain are highly promising - with strong demand in particular from the automotive parts industry. "Our orders last year were 20 per cent up on 1994," says Mr Mitchell, whose company sold £9m worth of machines in Britain in 1995.

The strong run for the UK machine tool industry needs, however, to be put in perspective. This year's likely production means the sector is only just about clawing back the ground it lost in the early 1990s recession, bringing output levels up to those in 1990. Output fell to less than £80m in 1992.

"The production growth of the past couple of years has been strong, but it's been from a position of bummer all," says Mr Robin Leggett, publications manager of Marketing Strategies for Industry, a consultancy specialising in the engineering industry.

Reflecting this point, there are some in the machine tool industry already beginning to worry about the next downturn. They are wondering out loud if the sector will be strong enough to survive without a further falling from grace of large and well-known companies.

PROFILE Cameron-Price

# Moving from cars to cosmetics

Switching from the automotive industry to the world of cosmetics may sound a little ambitious for most small engineering companies. But for Cameron-Price the eclectic mix of markets - ranging from brewing to ball-point pens - reflects how small engineers can develop an unusually broad strategy.

Traditionally the Birmingham-based company has concentrated on the plastic injection moulding of automotive parts, and the car industry still represents three-quarters of its turnover today. However, the company now sees itself less in terms of manufacturing one line of products than providing a whole engineering package to its customers.

Mr Tony Banks, managing director, tells how the strategy was underlined by a visit by an executive from Nipponenso, one of the company's largest customers alongside Lucas and Duntop. "He told us we were not selling injection mouldings but selling solutions, because we had saved him money by selling him our products."

"Ten years ago we would have been given a drawing by a customer and we would have manufactured to that drawing. Increasingly customers are pushing down the design responsibilities, which is good because one of our main strengths is innovation. With our expertise in plastics and other materials, we can replace metal parts to make products which are technically as good, but at lower costs," he says.

It was this approach to problem-solving that led to the company's involvement with Boots in designing the packaging for a new line of cosmetics. By using its computer design technology - normally employed to develop car parts - the company created its own designs based around the cosmetics' measurements.

It was then able to produce three-dimensional pictures of prototype packaging, combining the work of design consultants with plastics engineers in a successful bid for the contract. A similar attitude has won the company work designing and

producing the widgets in beer cans, as well as presentation boxes for Parker pens.

The realisation that the company's strength lay as much in its design work as its technical skills has contributed to dramatic growth in recent years. Turnover now stands at around £2m compared to £1.2m five years ago, helped by a substantial investment plan worth around £2m over that period.

The investment - in a new factory and in integrated computer-controlled machinery - has also helped to reduce labour costs and improve productivity. Five years ago, the company employed 120 people, while today the workforce stands at around 90 and the factory works at capacity throughout the week.

Last month the management completed a buy-out deal from the company's founder, with the help of £2.5m of equity from Hays Development Capital. Mr Banks says: "We wanted to be a world-class supplier, and to do that you have to

have world-class equipment. If you do not invest, you are dead and you end up with clapped-out old plant, doing the type of production nobody else would want to do."

"The industry learned a bitter lesson 10 years ago, when we were exporting jobs to Germany, France and Spain. Today we can manufacture identical products at a big cost saving to them, not just through the rate of exchange and social costs but because our output is so much better."

As a smaller company with large ambitions, Cameron-Price has relied on partnerships with the public sector such as universities and local authorities. It uses the services of Midland universities both for training and for solving manufacturing problems.

But the most important partnerships are those with its own customers. With Lucas, for instance, Cameron-Price is developing a system of electronic data interchange. This will allow the company to monitor stock levels at Lucas and reduce its

customer's paperwork when ordering supplies. For Cameron-Price, the move is a logical progression of a trend which began with open-book costing, following the lead of Japanese manufacturers.

The company has attempted to create an entire corporate culture around these customer partnerships. Machine operators are trained to be able to talk directly to customers to explain how their work is progressing. And the company has improved its recruitment to take on more graduates - particularly those with language skills.

Computer-aided design has proved essential to the new engineering service which the company aims to provide. When Ford in Dagenham asked Cameron-Price to help develop a new brake fluid reservoir, the Birmingham company was able to turn a Ford sketch drawing into a three-dimensional picture and then into a prototype with full costings within one week.

Richard Wolfe

Interview: Graham Mackenzie

# An image problem remains

The federation has been casting around for a new sense of purpose, writes Peter Marsh

The engineering industry in the UK suffers from a "fairly serious" image problem, with too many people regarding it as old-fashioned, boring and dirty. Such a sentence could easily have been written any time over the past 30 years. However, it remains true today, according to Mr Graham Mackenzie, director general of the Engineering Employers' Federation, the main trade body for the industry.

"The profile of engineering has not been well understood,"

says Mr Mackenzie. "The industry has got to try to counter this by talking more about the positive side to the industry and the good and satisfying jobs that are available."

The federation, which this year is celebrating its 100th birthday, has launched a series of scholarship schemes in which member companies will make available £100,000 to boost education and training in the industry.

Mr Mackenzie says that shortages of people, of virtually all skill levels, is one of the industry's biggest problems. This is not simply down to difficulties in getting enough good people to progress through on-the-job training and take on senior jobs in the sector, but can be linked to

lack of perceived attractiveness to the industry in schools and higher education. "Not enough people are studying [engineering related subjects] at A level and a large number of university science places are unfilled. What's happening is quite frightening," he says.

The EEF has got problems of its own. Talks about merging its activities with those of the Confederation of British Industry, a much bigger body and which speaks for a range of service sectors as well as manufacturing, broke down in 1994 because of disagreements about how to marry the two organisations' interests.

Since then, the federation, with about 5,000 members split into 15 regional groupings, has cast around for a new sense of

purpose. Earlier this year it published a strategy paper committing the federation to improve services to members in areas such as advice on exporting or training, as well as setting out plans for a 10 per cent increase in members.

Mr Mackenzie believes prospects for UK engineering are bright, in spite of the downturn in the sector since the end of last year. "Britain is increasingly competitive in world terms. It's the place where [overseas companies] come and build car plants." However, he insists big problem areas remain - one being lack of sufficient capital spending.

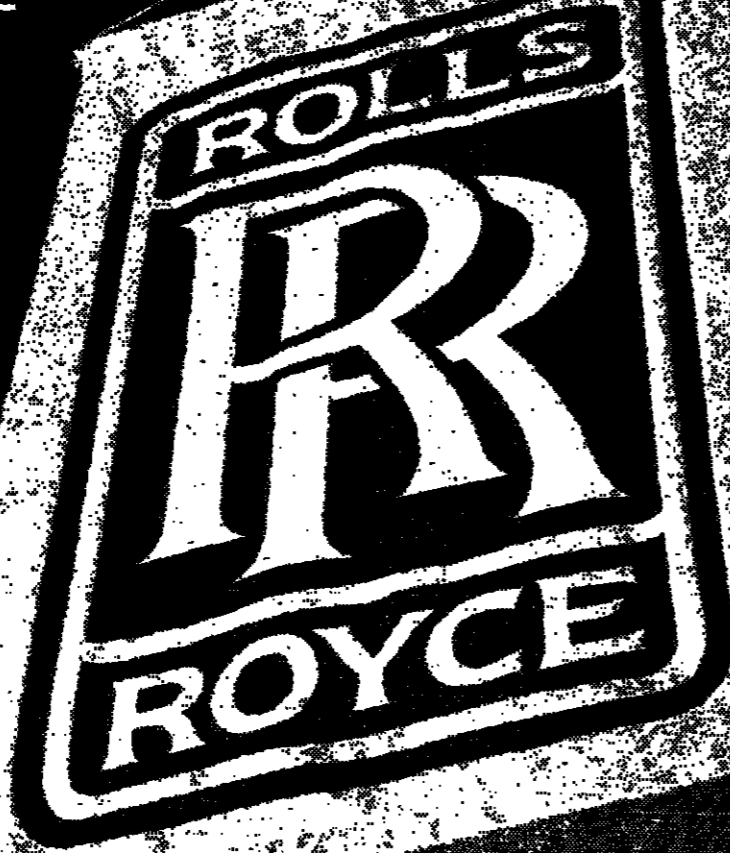
One view on this is because the UK has a fairly good record in expanding output through teamworking and other man-



Mackenzie problem areas remain

agement techniques, it does not need to invest as much as other countries in new plant and buildings. Mr Mackenzie disagrees. He thinks it ludicrous to believe the UK can compete with other countries in precision industries without continually modernising its capital equipment and tooling.

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